

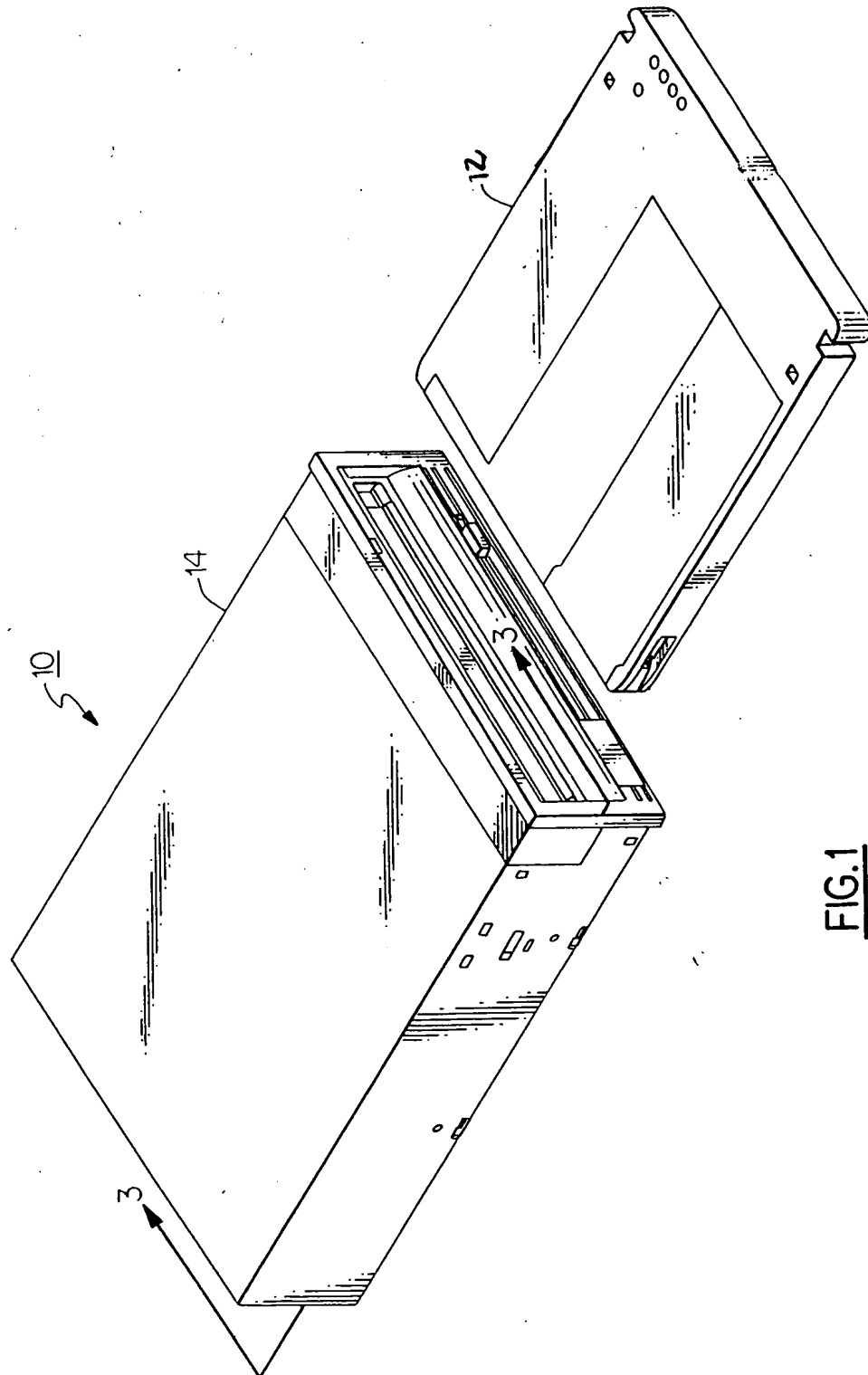
08/485070

Title: METHOD AND APPARATUS FOR MOVING CARRIAGE ASSEMBLY
FROM INITIAL POSITION TO TARGET
POSITION AND OPTICAL DISC SYSTEM INCLUDING SAME

6741529

Applicant: Kurt W. Getreuer
Application No.: 08/485,070
Docket No.: 951028(US)USC1X1X1D1 MMMI

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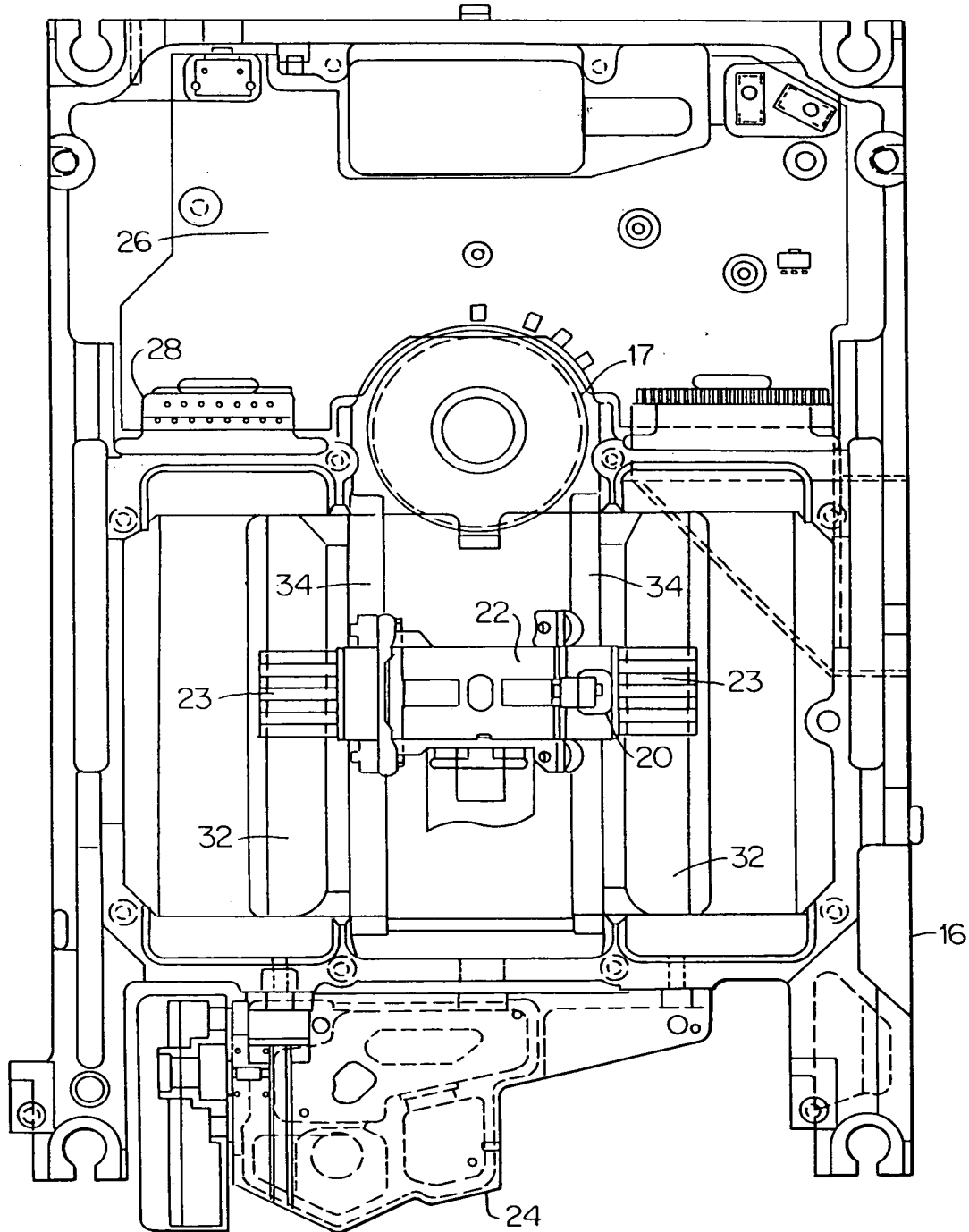


FIG. 2

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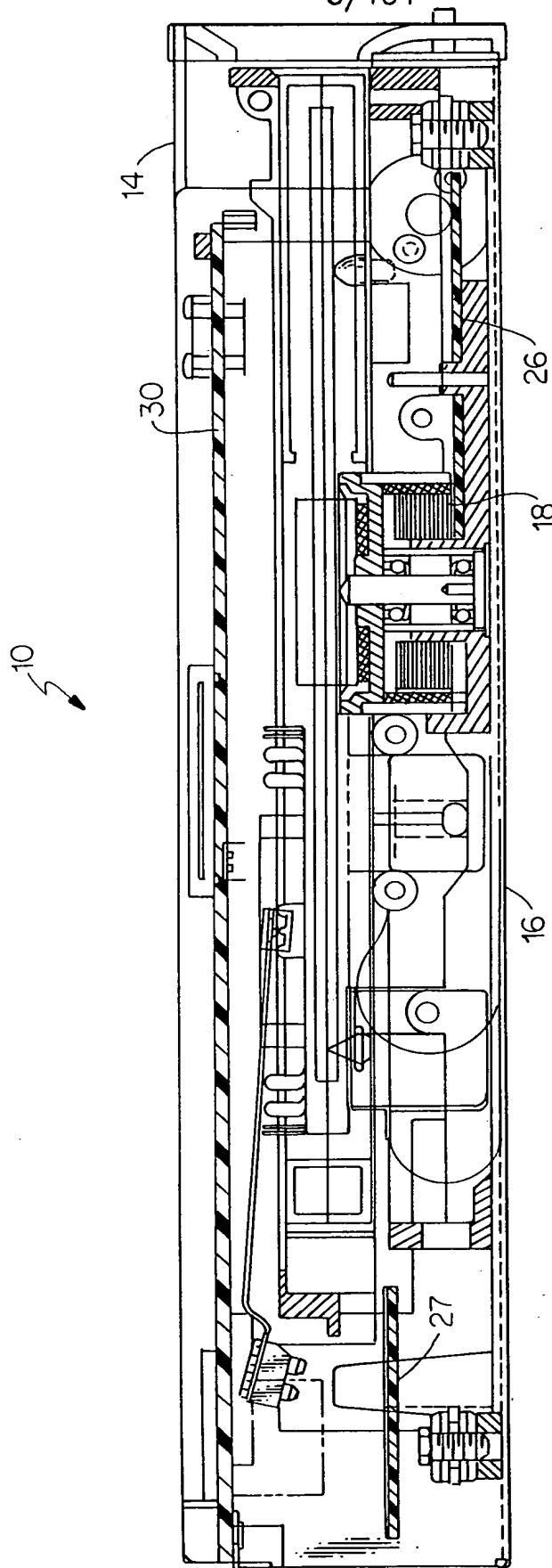
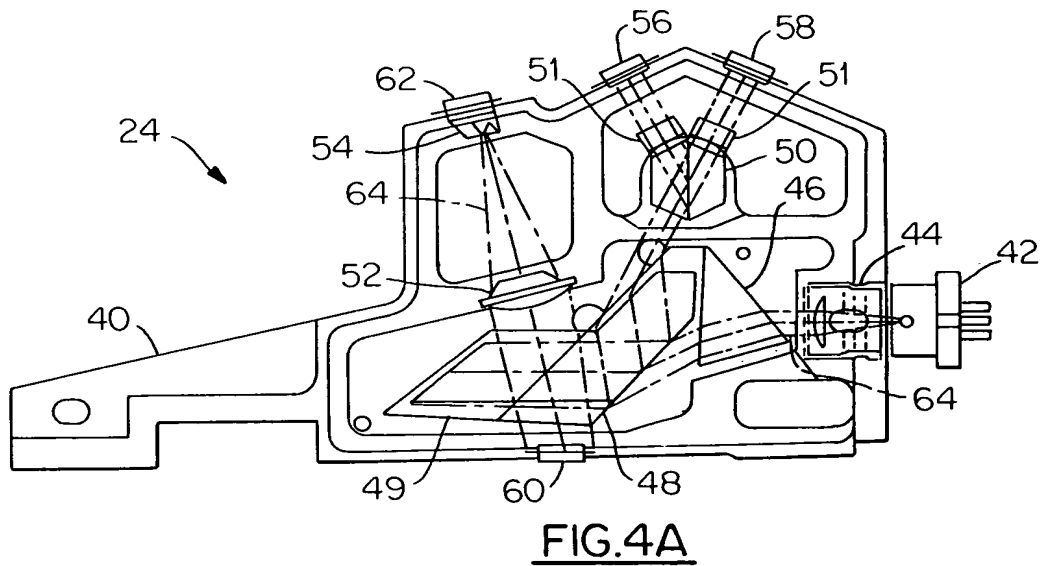
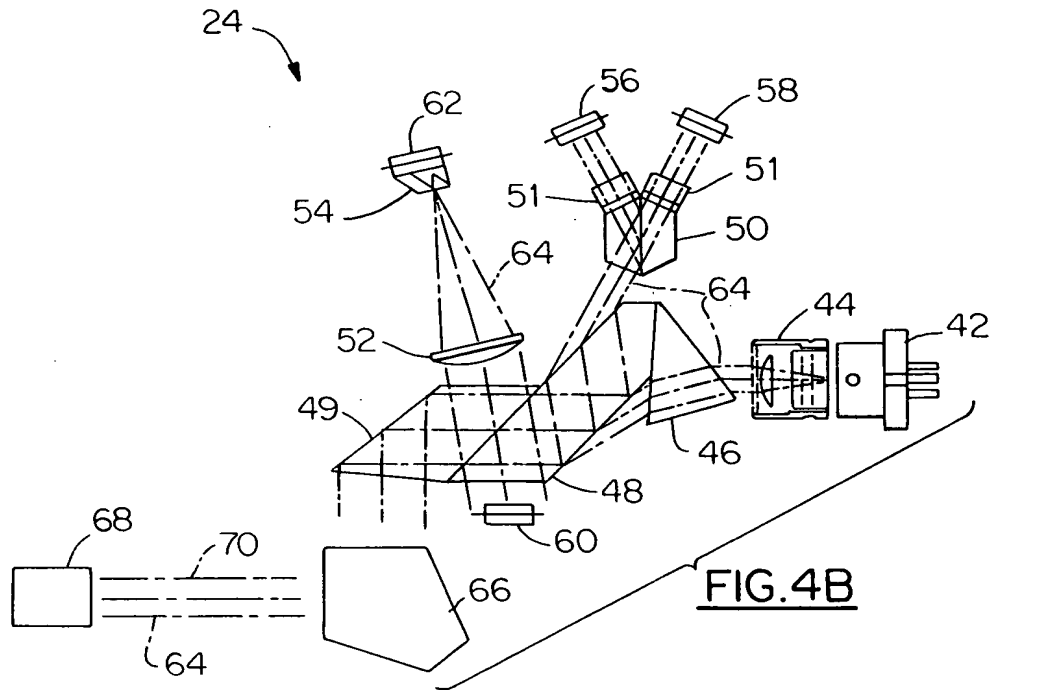


FIG. 3



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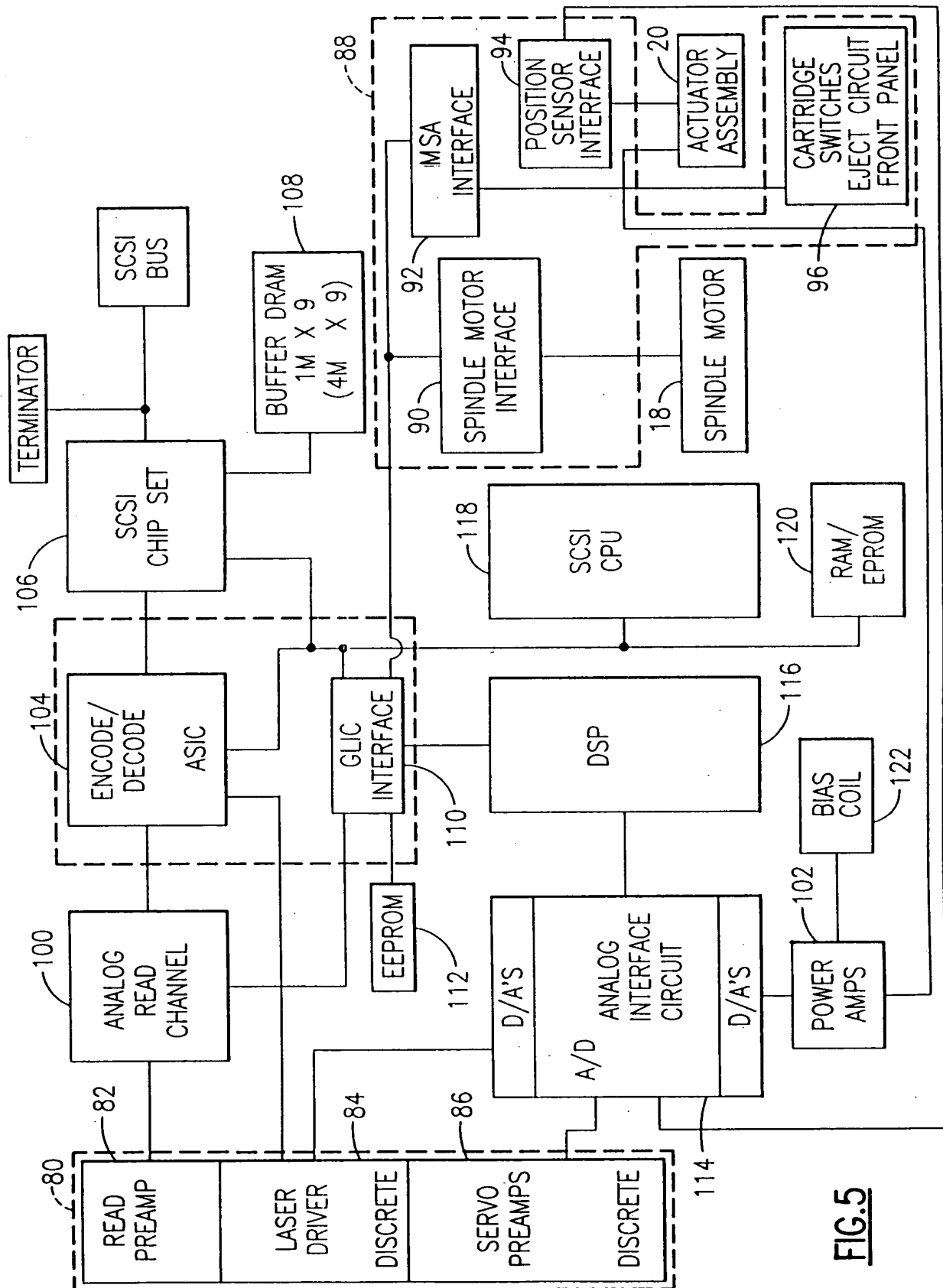
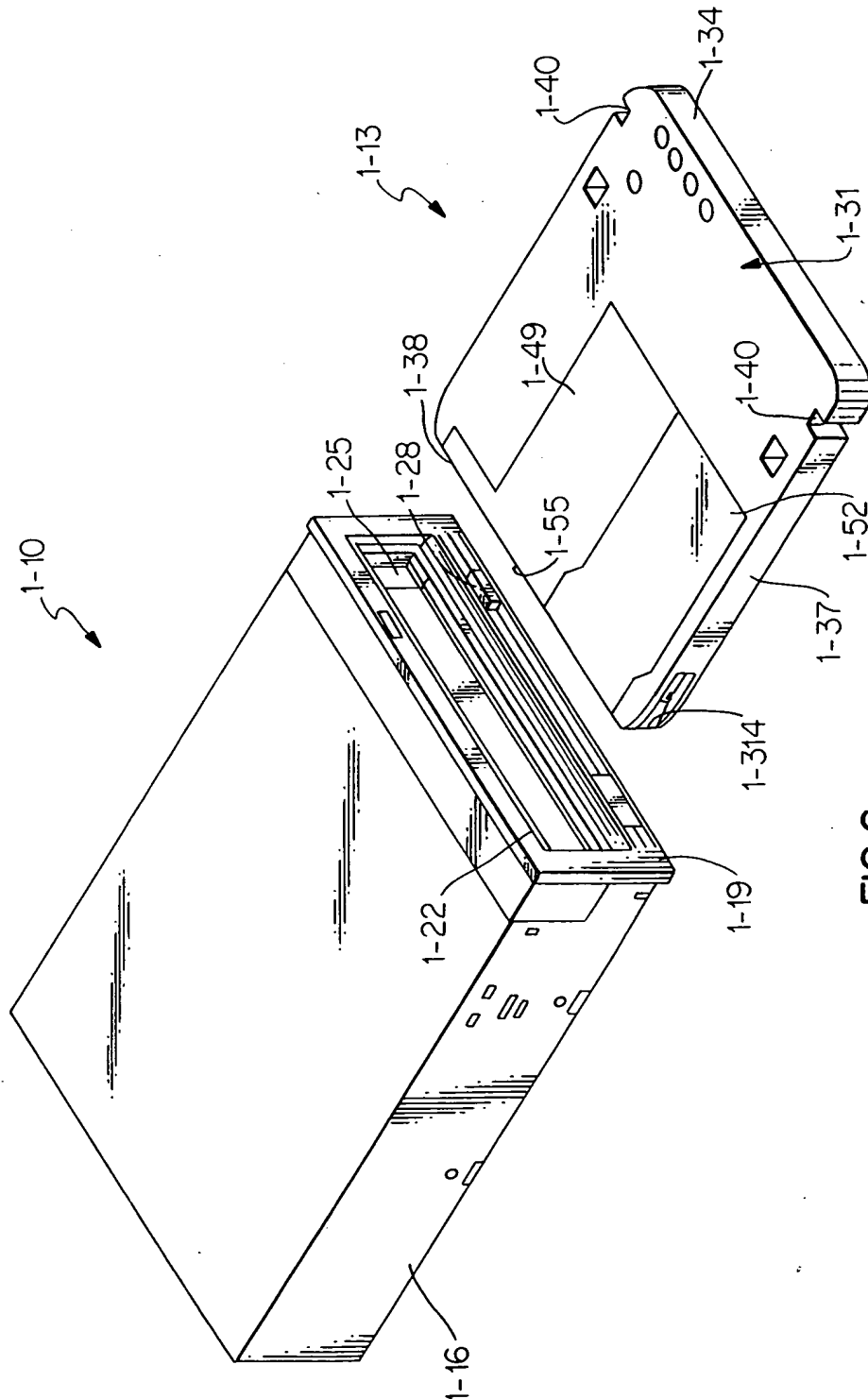


FIG.5



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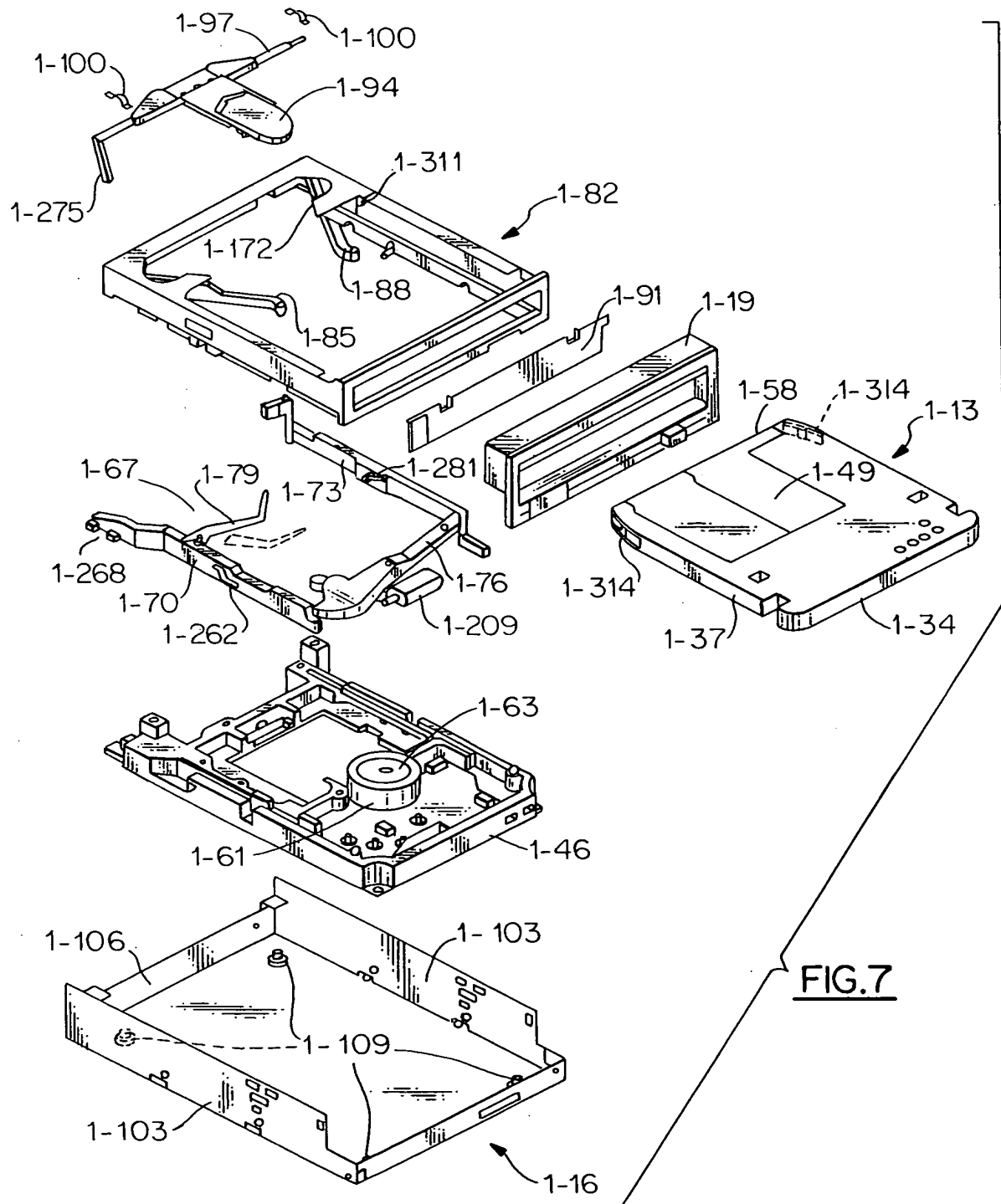


FIG. 7

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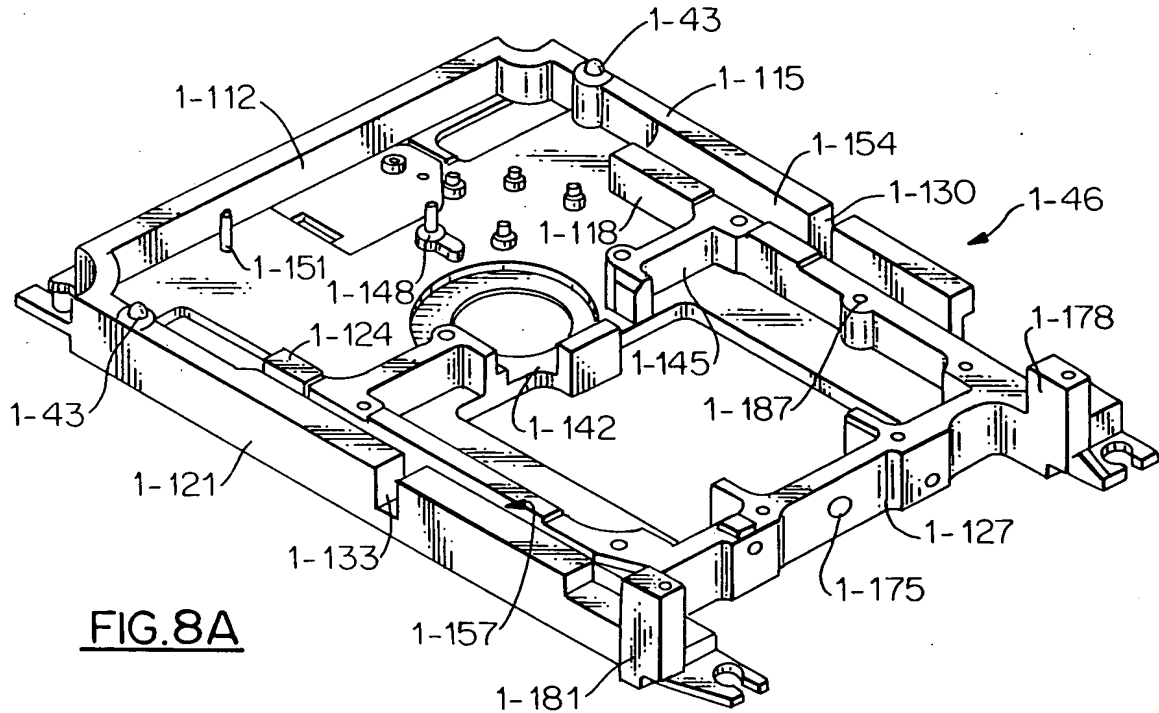


FIG. 8A

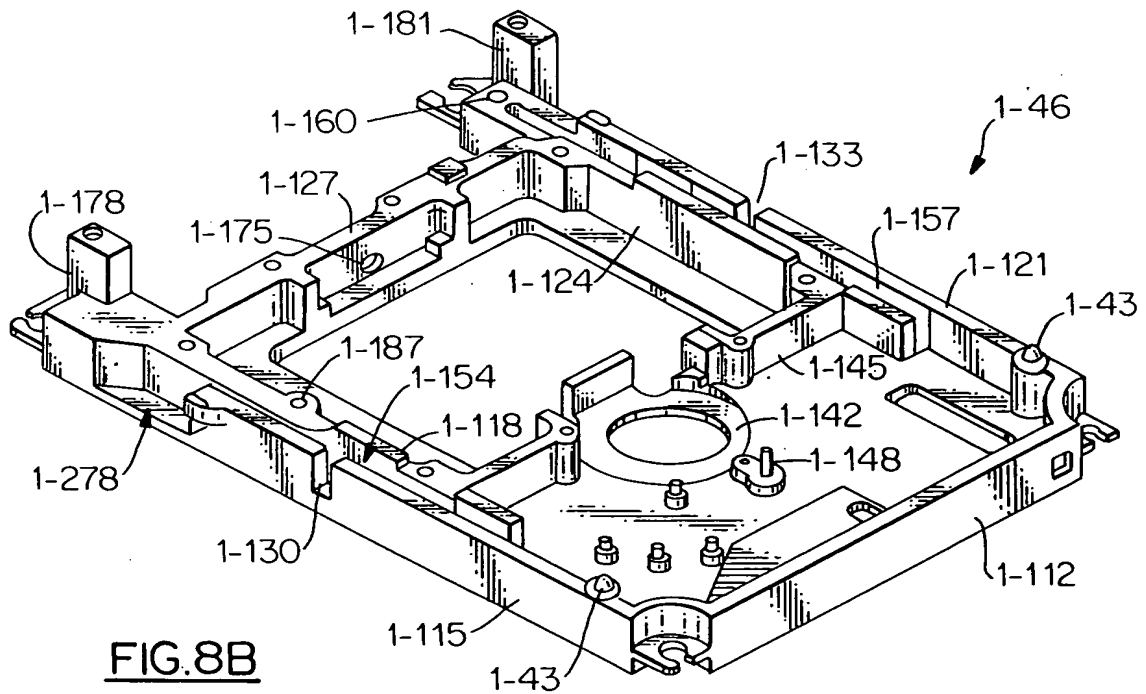


FIG. 8B

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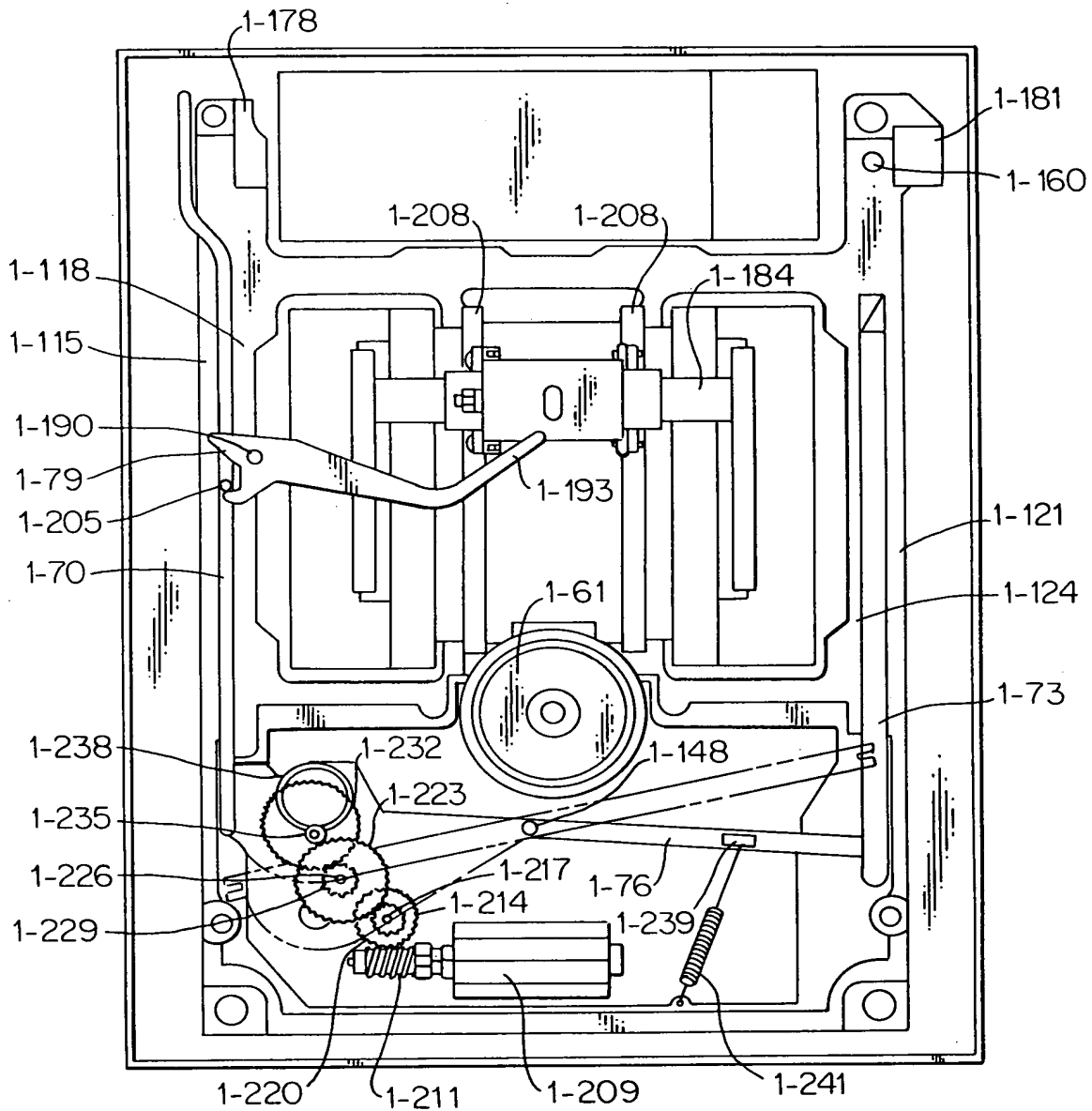


FIG. 9

FIG.10A

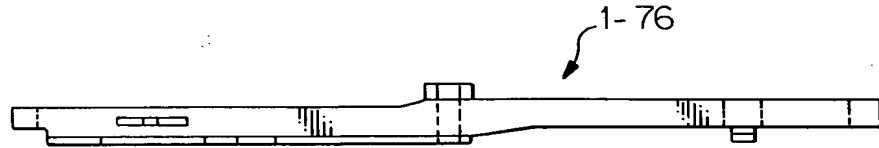


FIG.10B

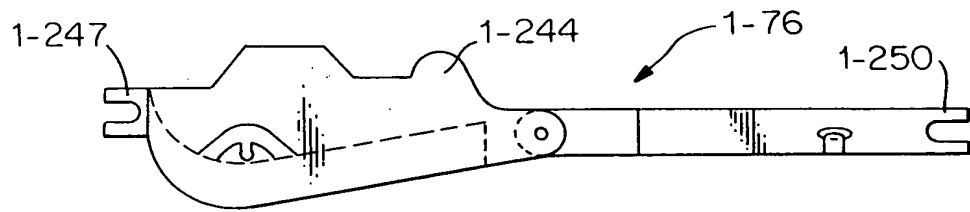


FIG.10C

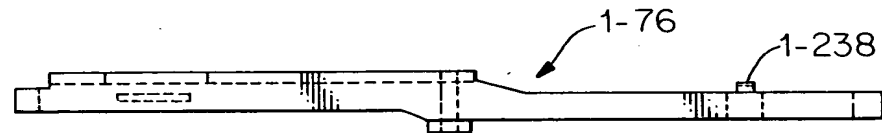


FIG.10D

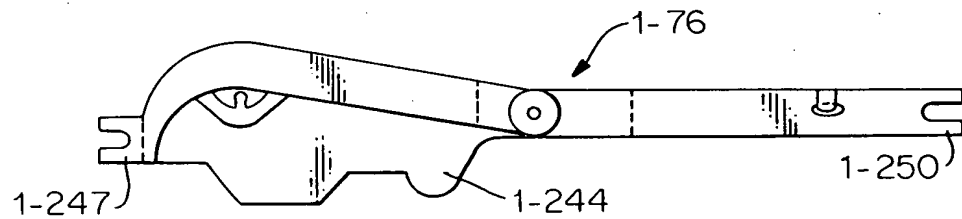


FIG.10E

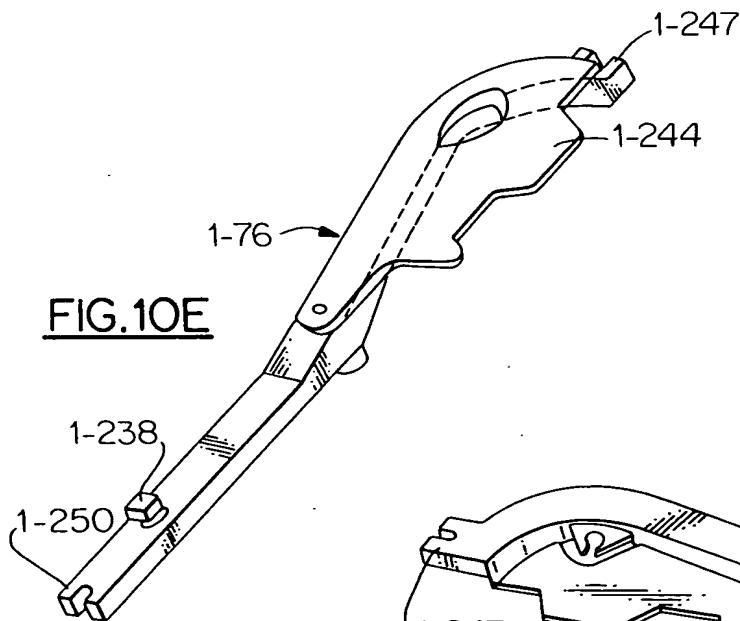
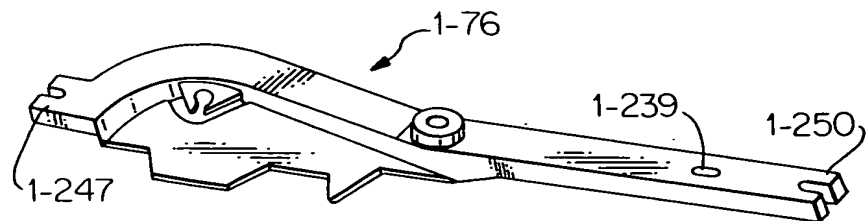


FIG.10F



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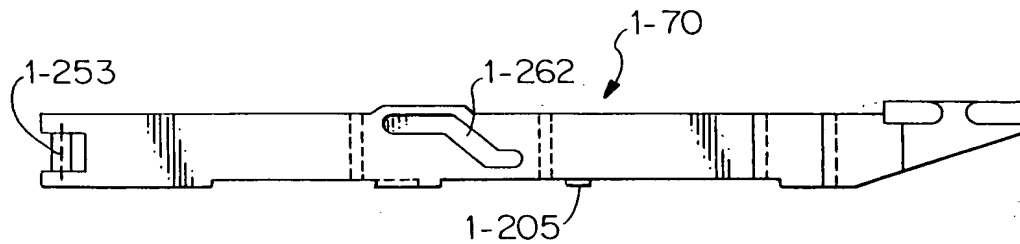


FIG. 11A

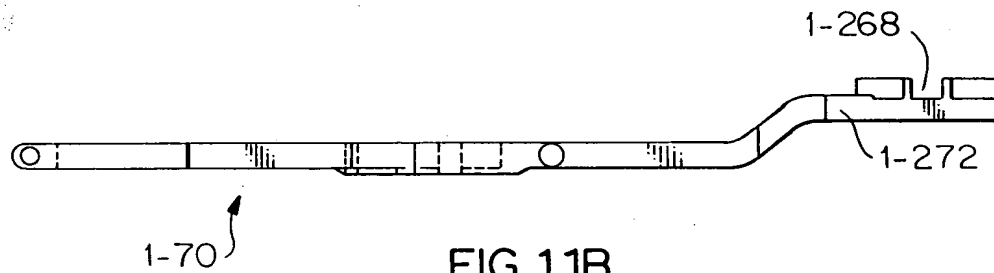


FIG. 11B

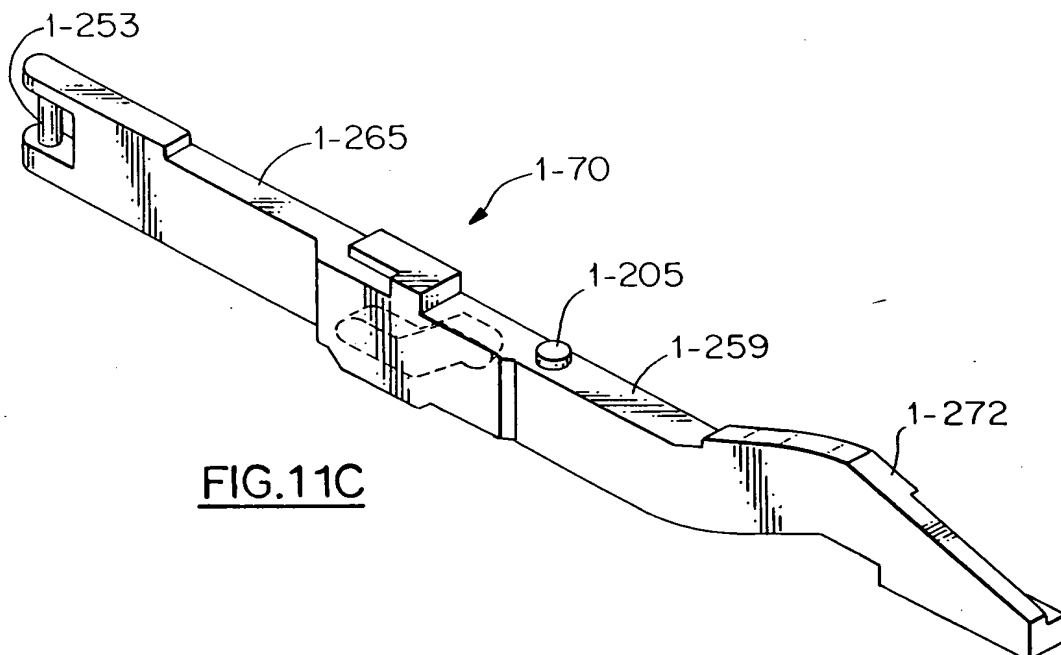


FIG. 11C

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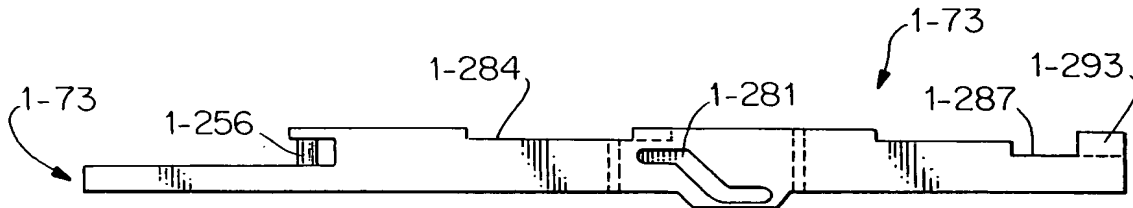


FIG. 12A

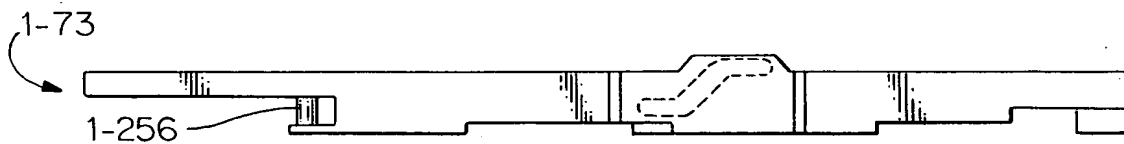


FIG. 12B

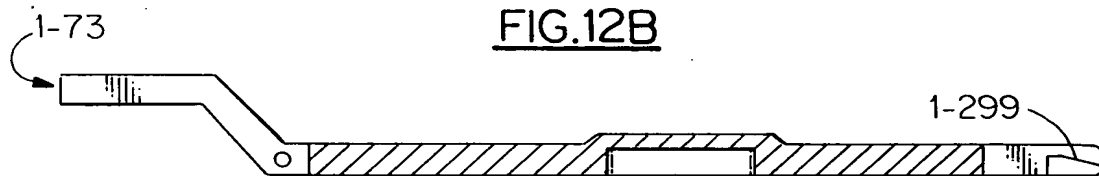


FIG. 12C



FIG. 12D

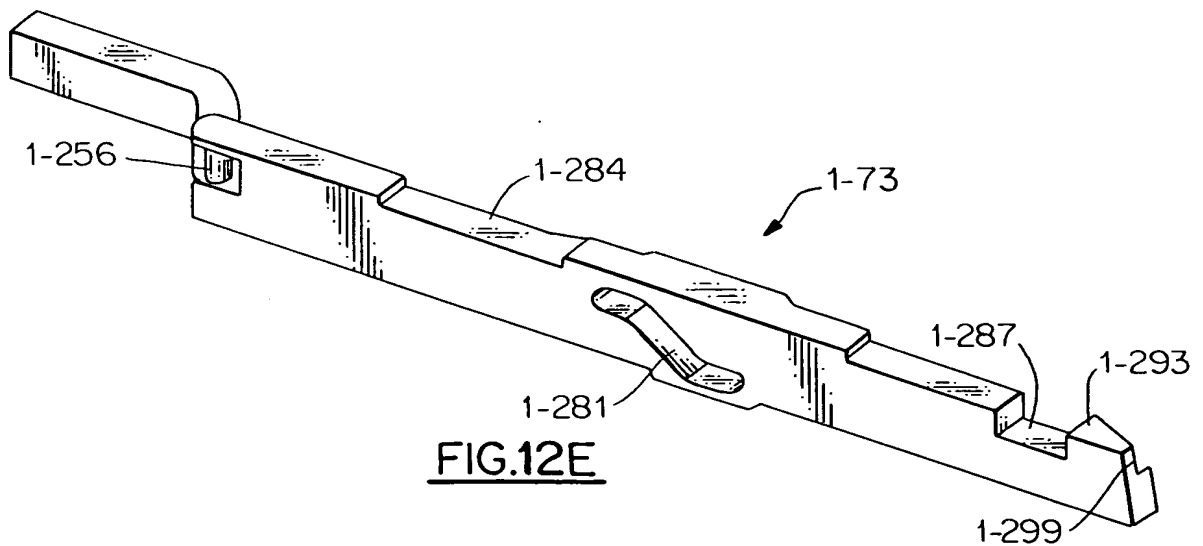


FIG. 12E

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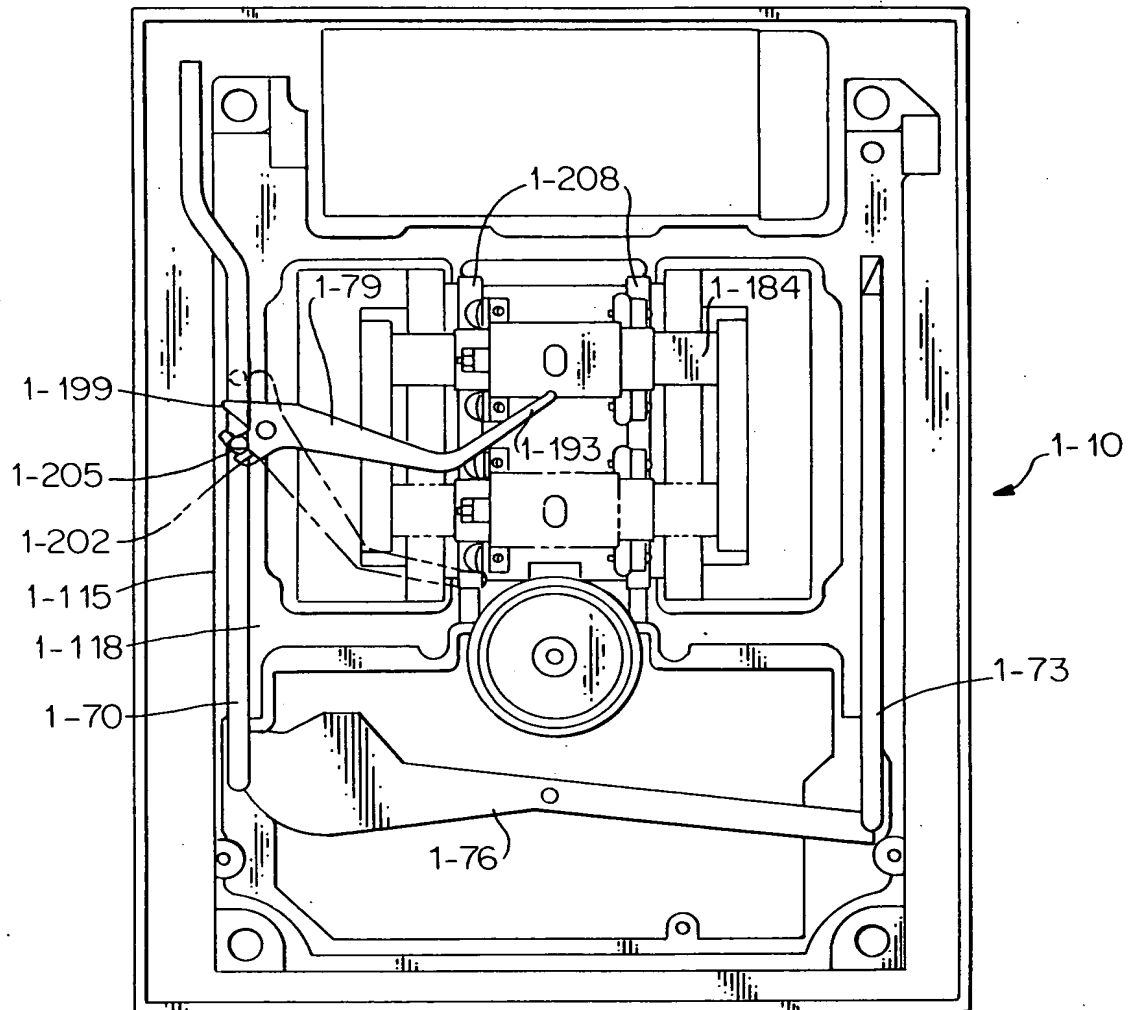


FIG.13

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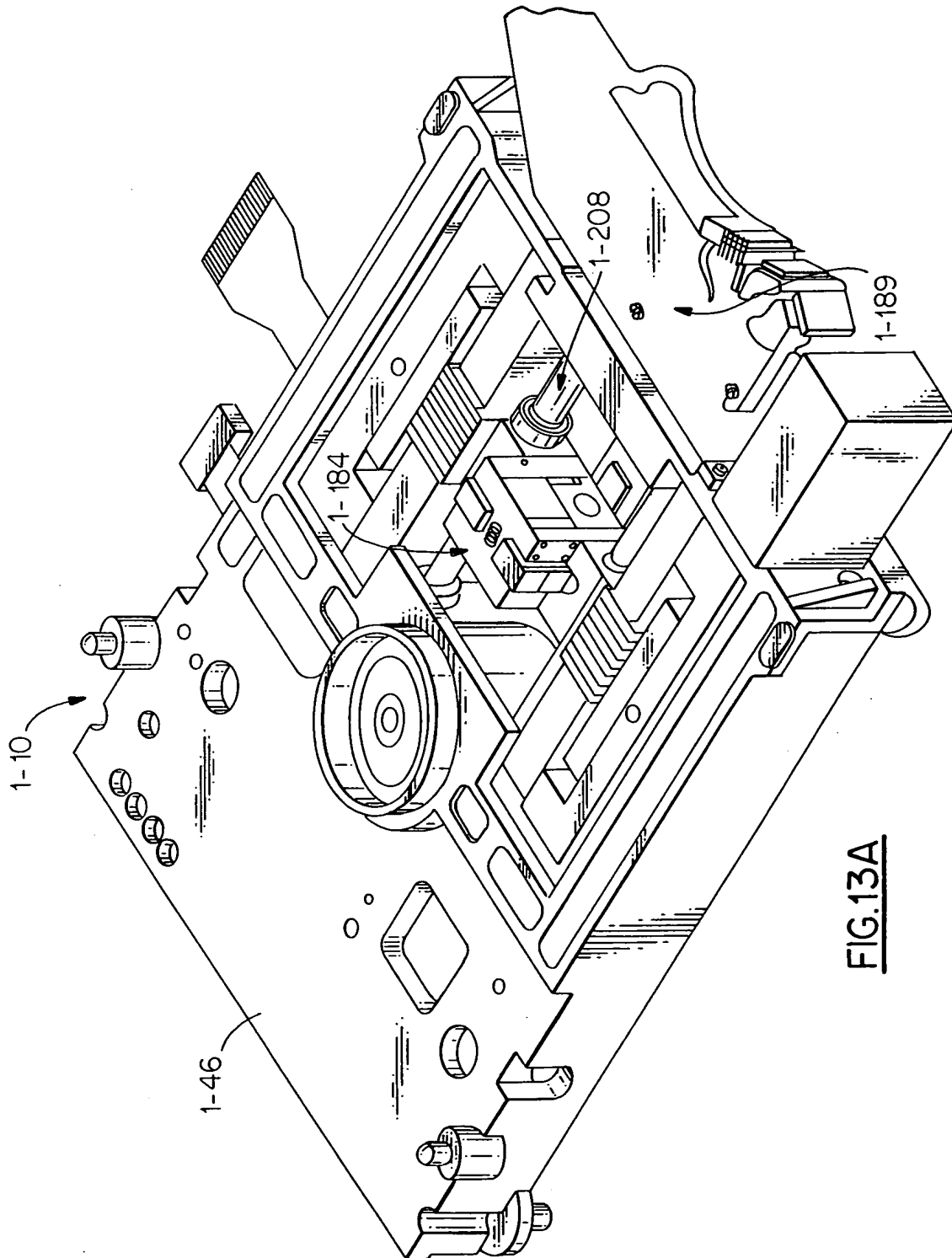


FIG.13A

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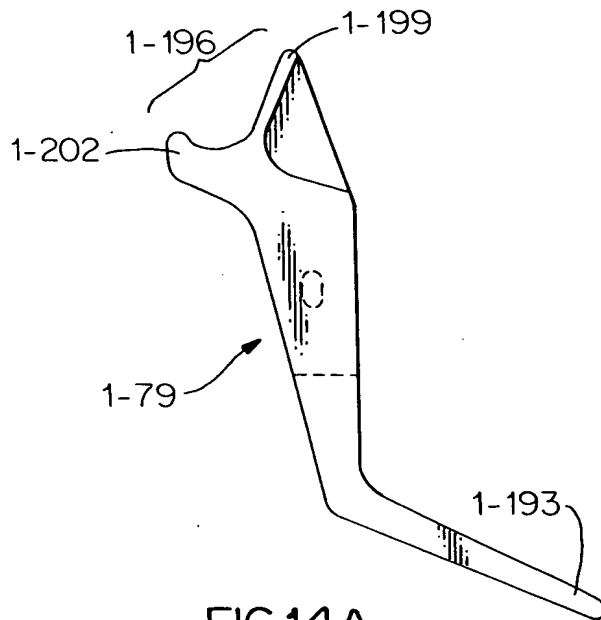


FIG. 14A

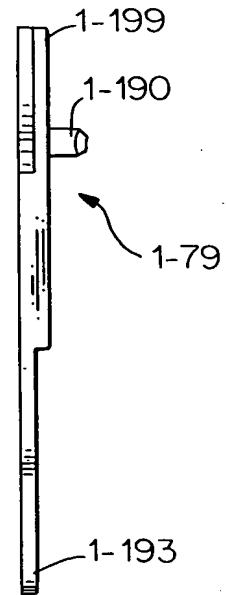


FIG. 14B

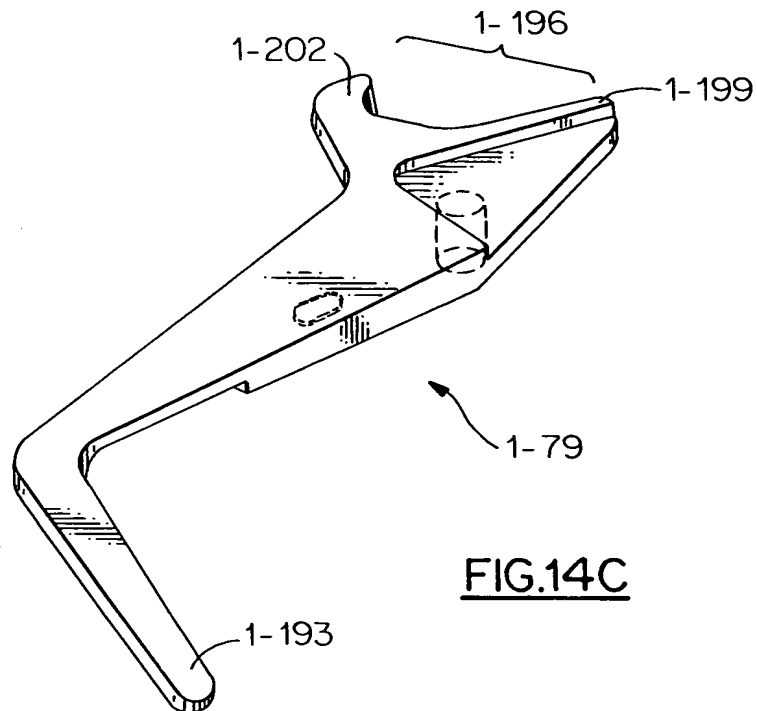


FIG. 14C

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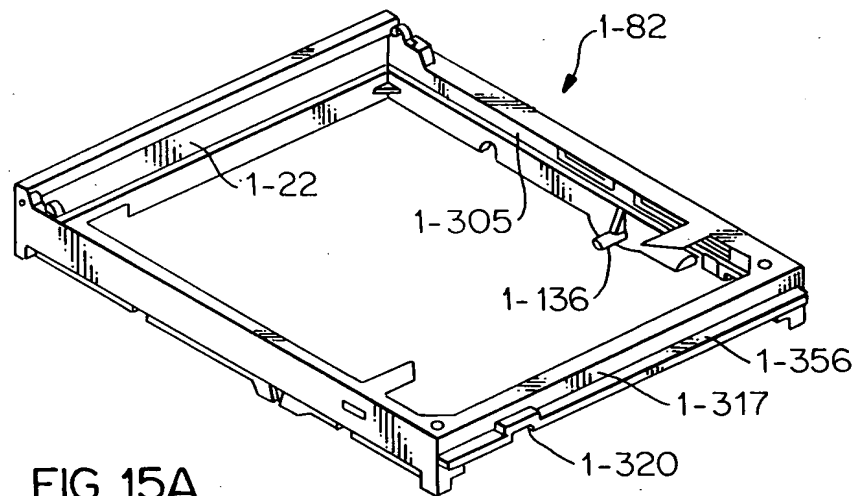


FIG. 15A

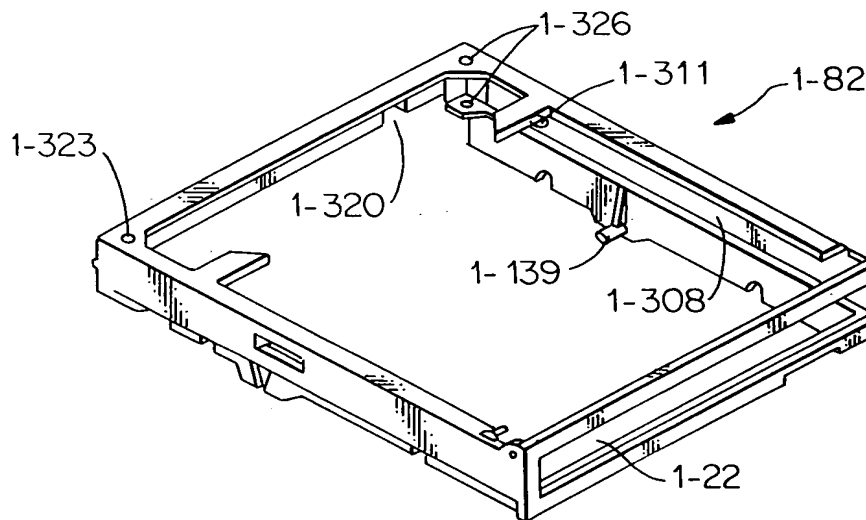


FIG. 15B

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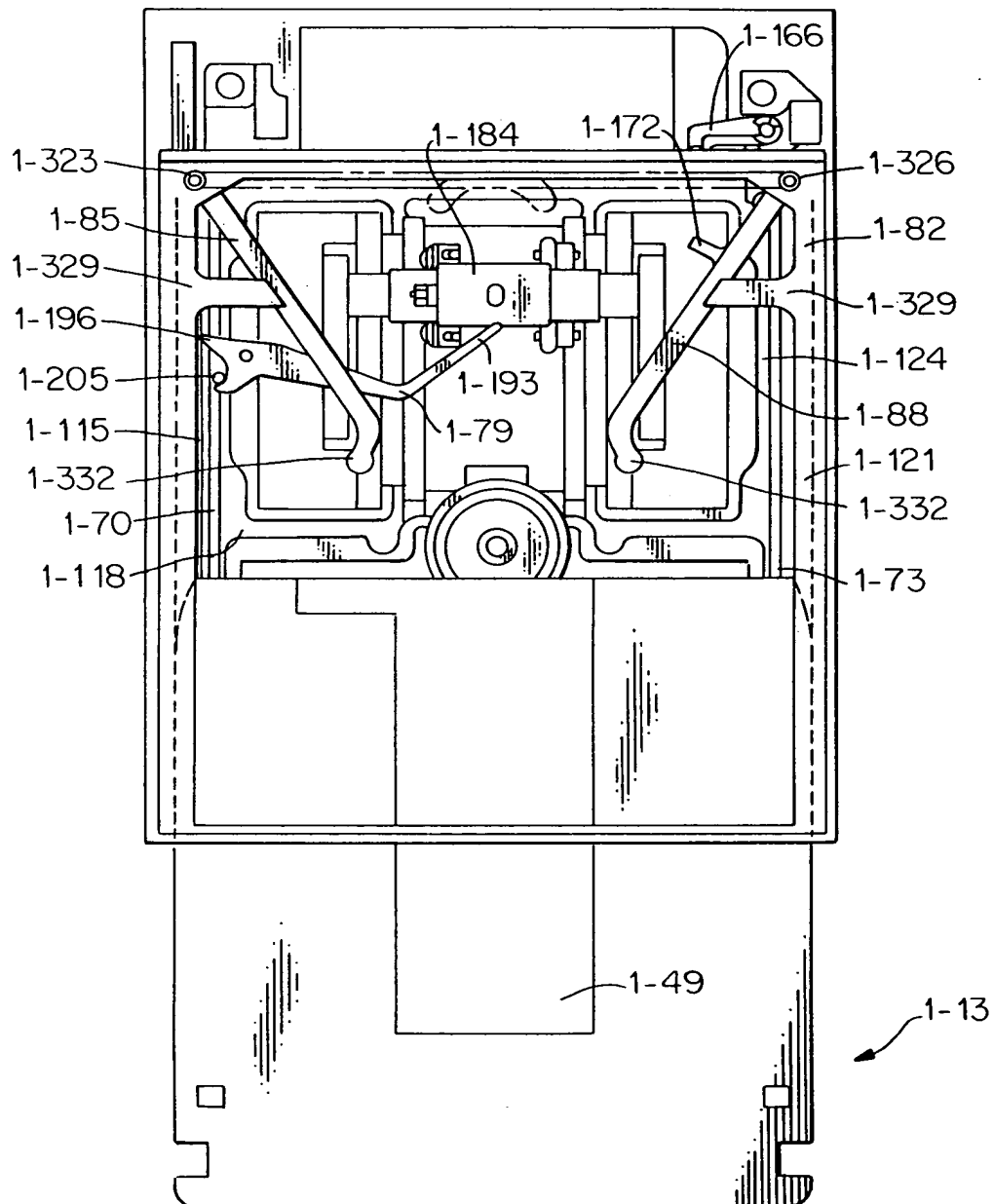


FIG.16A

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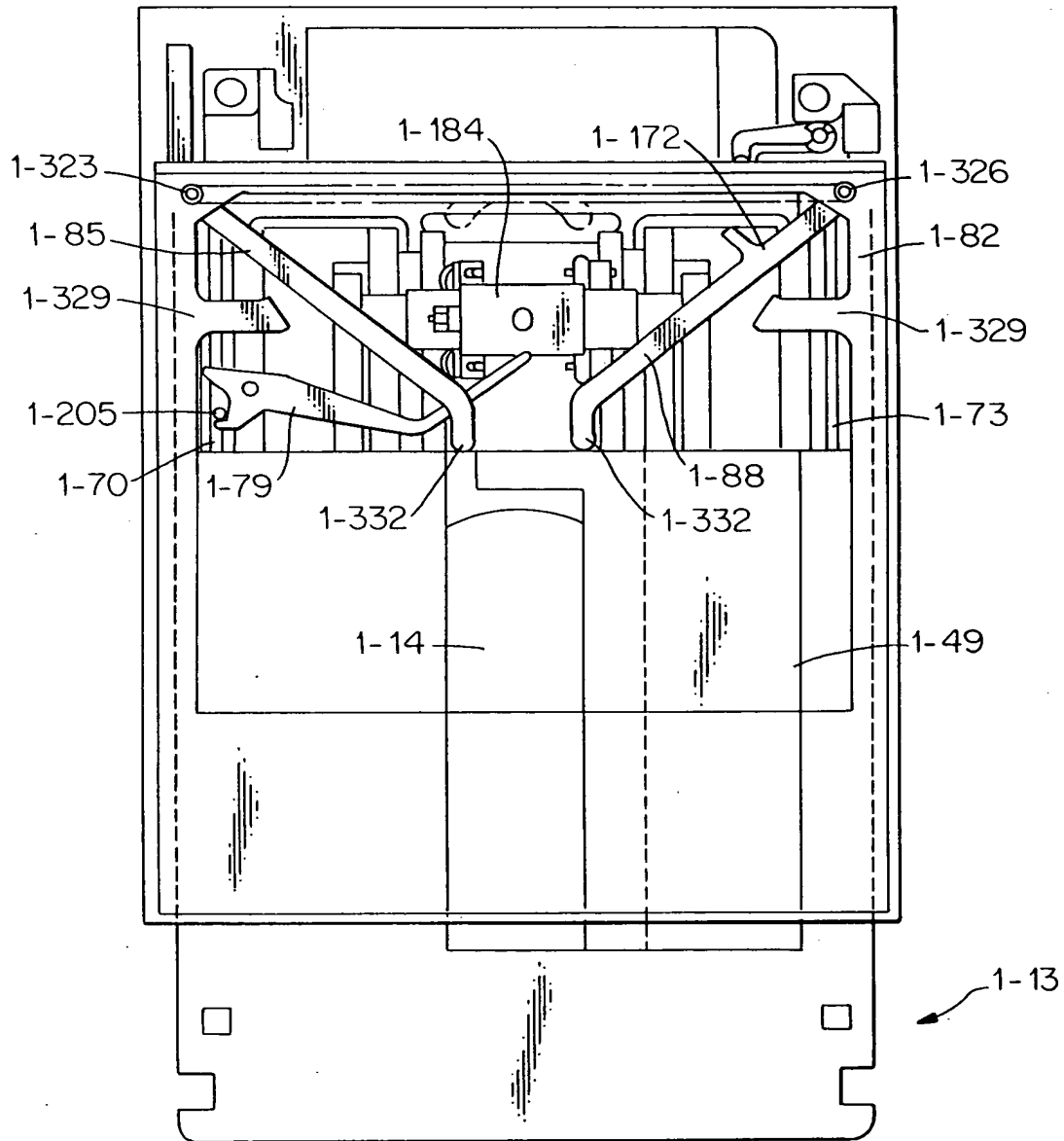


FIG. 16B

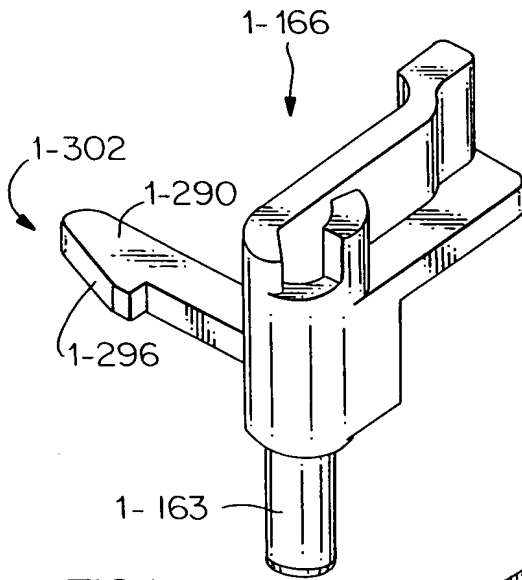


FIG. 17A

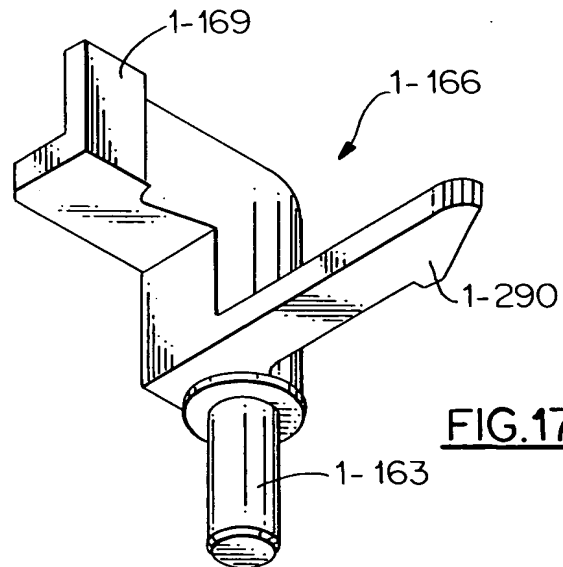


FIG. 17B

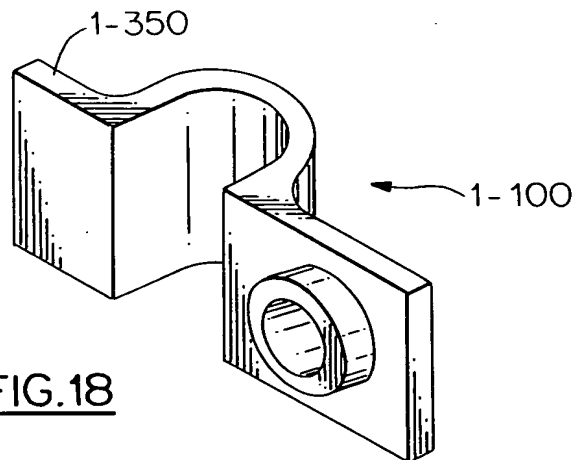


FIG. 18

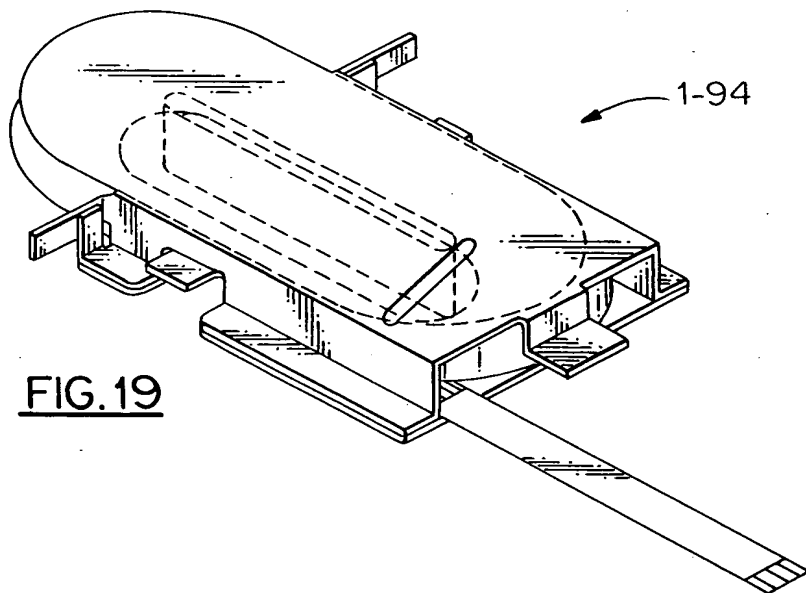
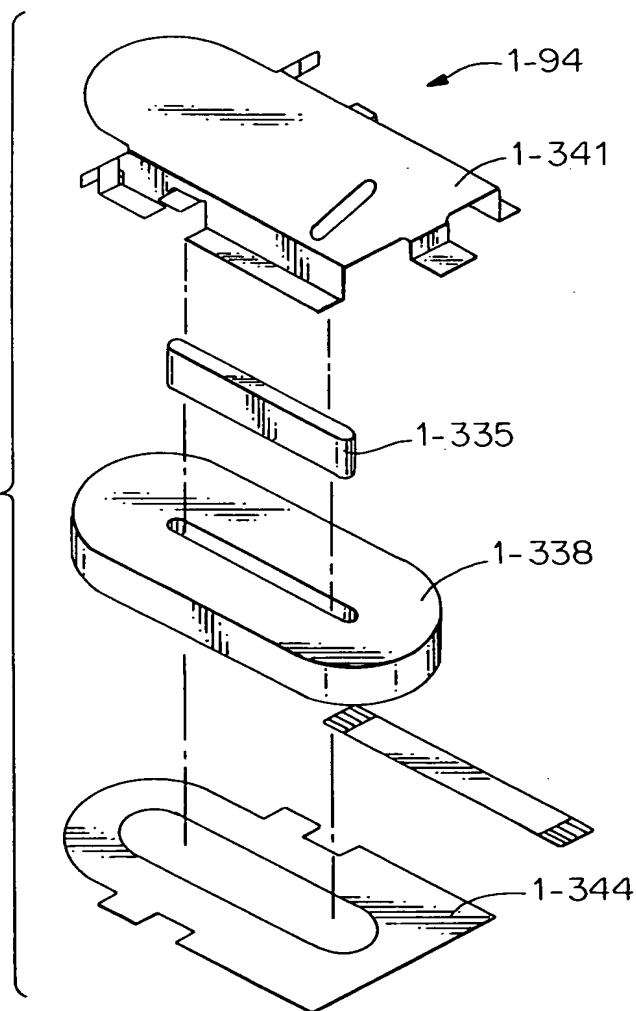
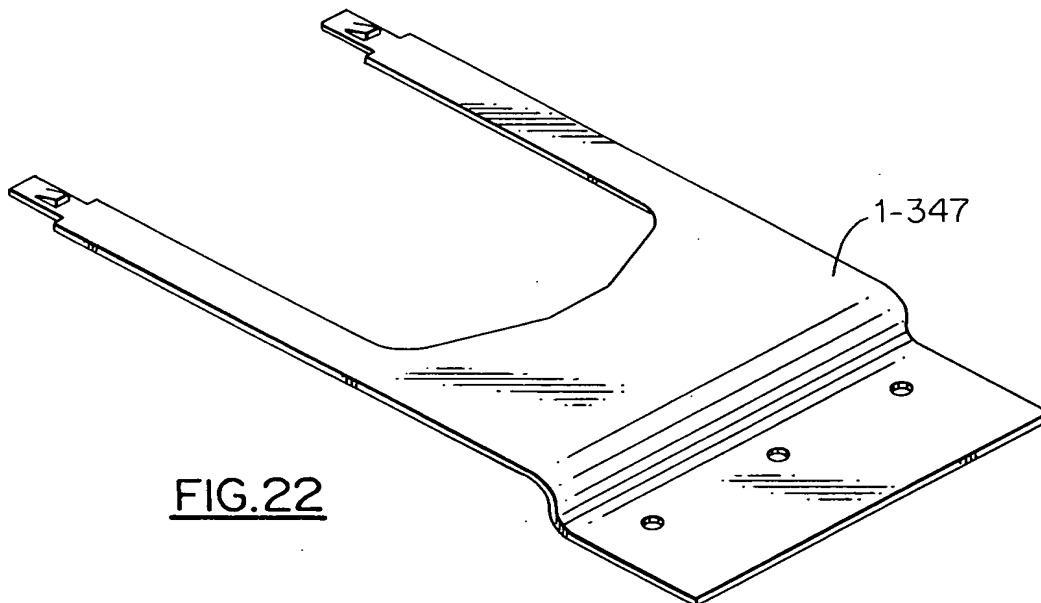
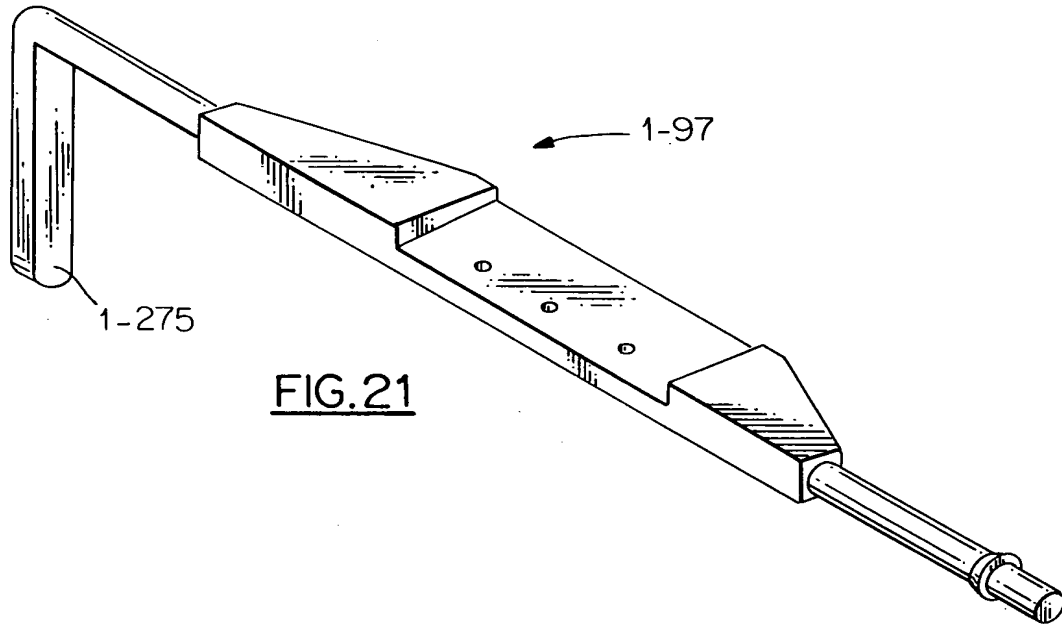


FIG. 20





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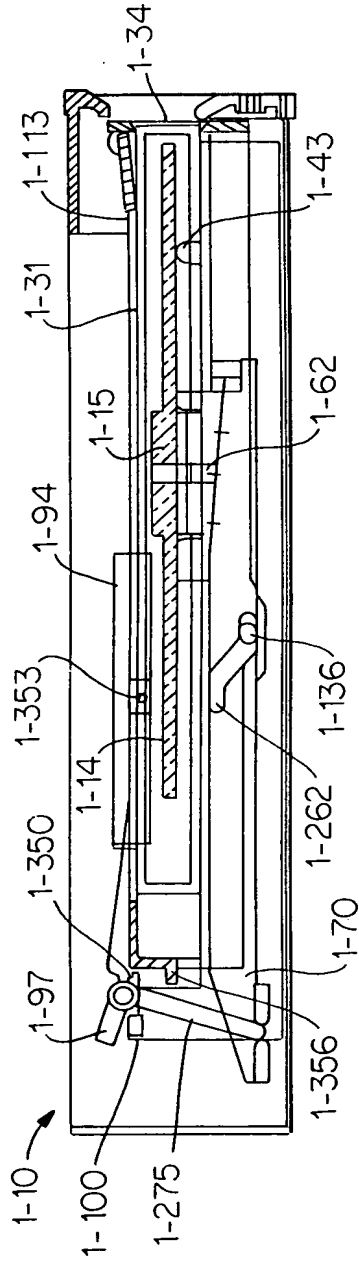


FIG. 23

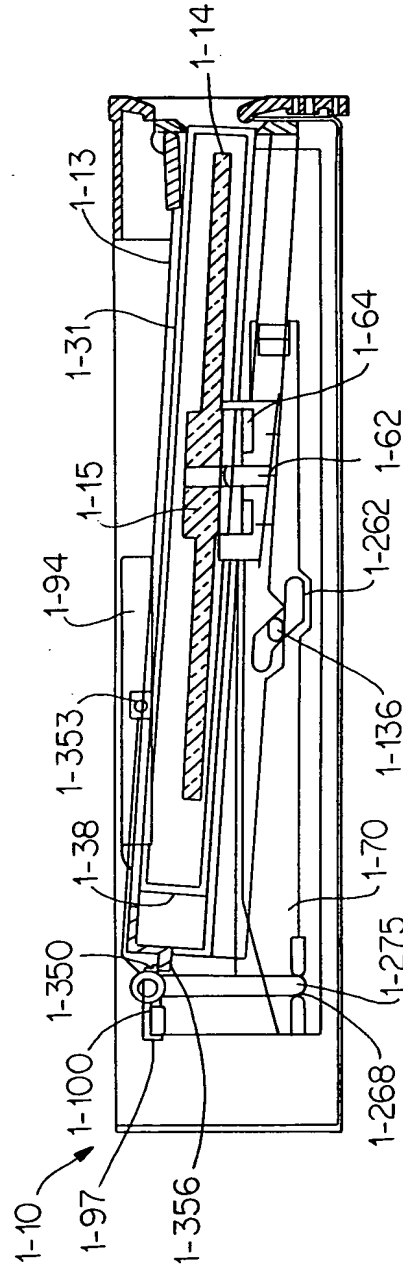


FIG. 24

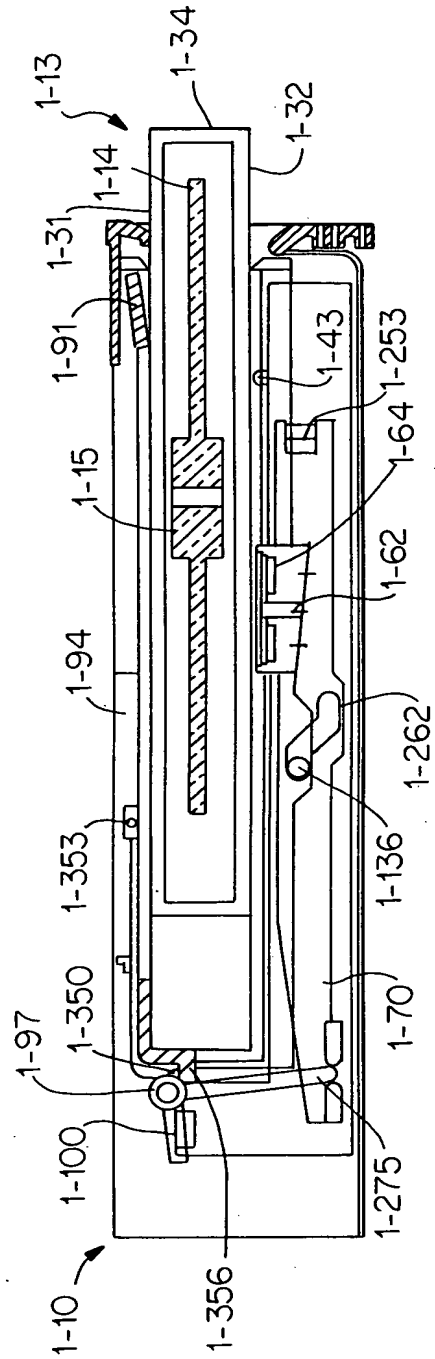
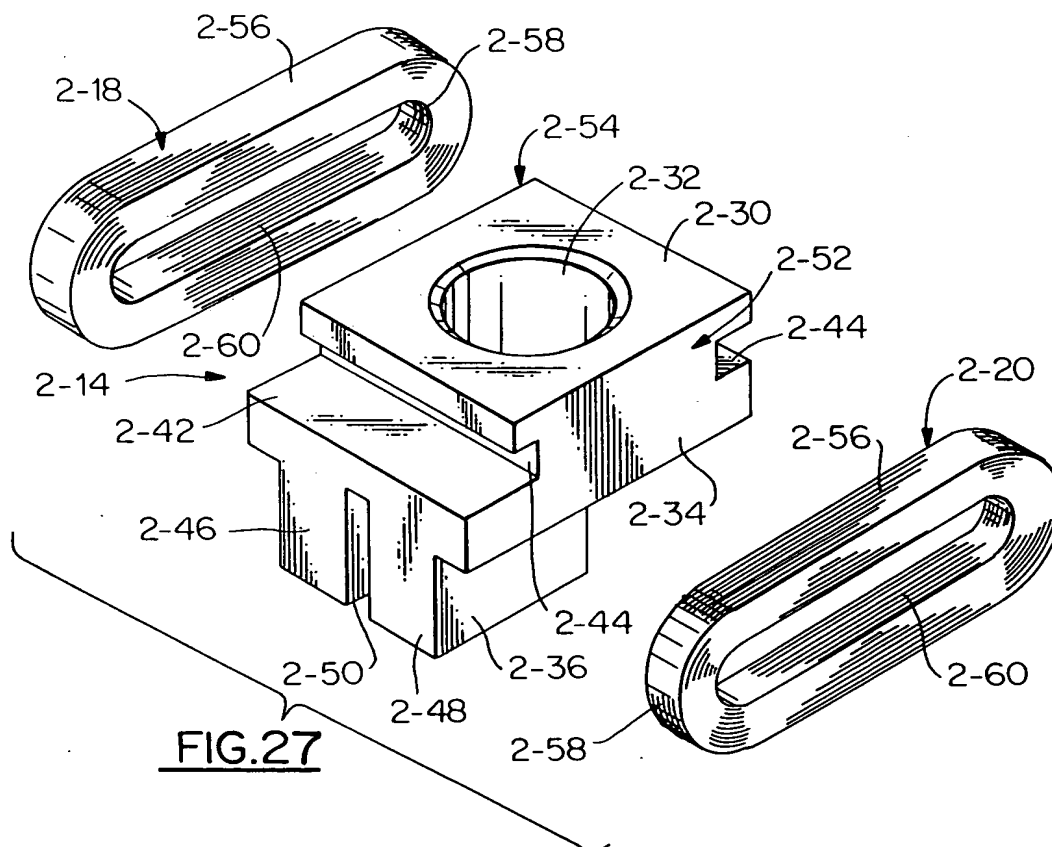
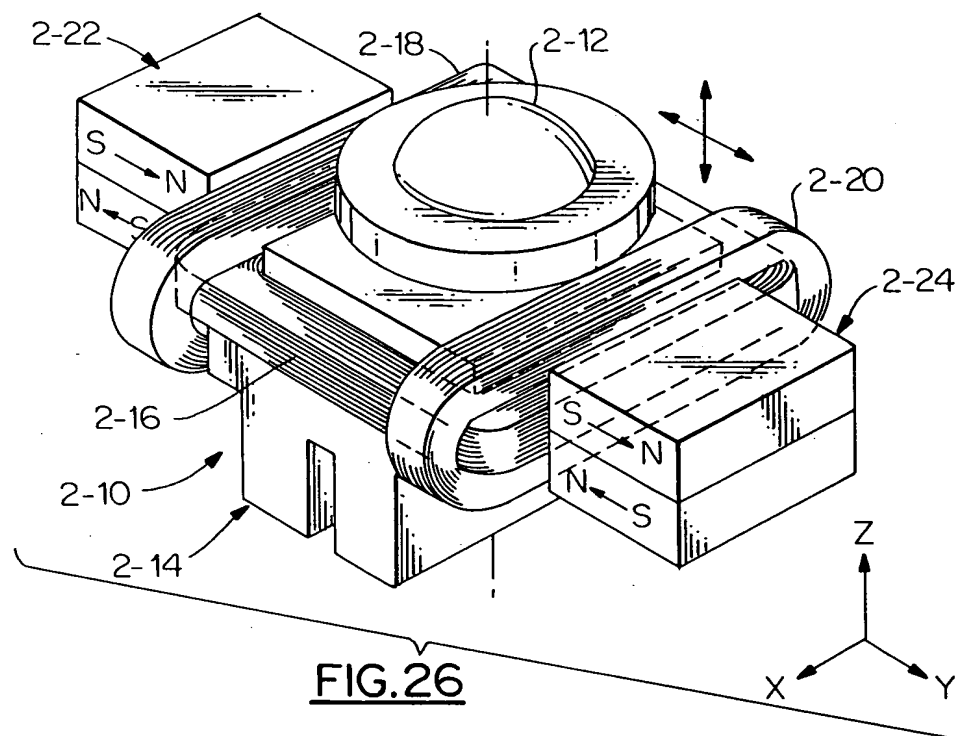


FIG. 25

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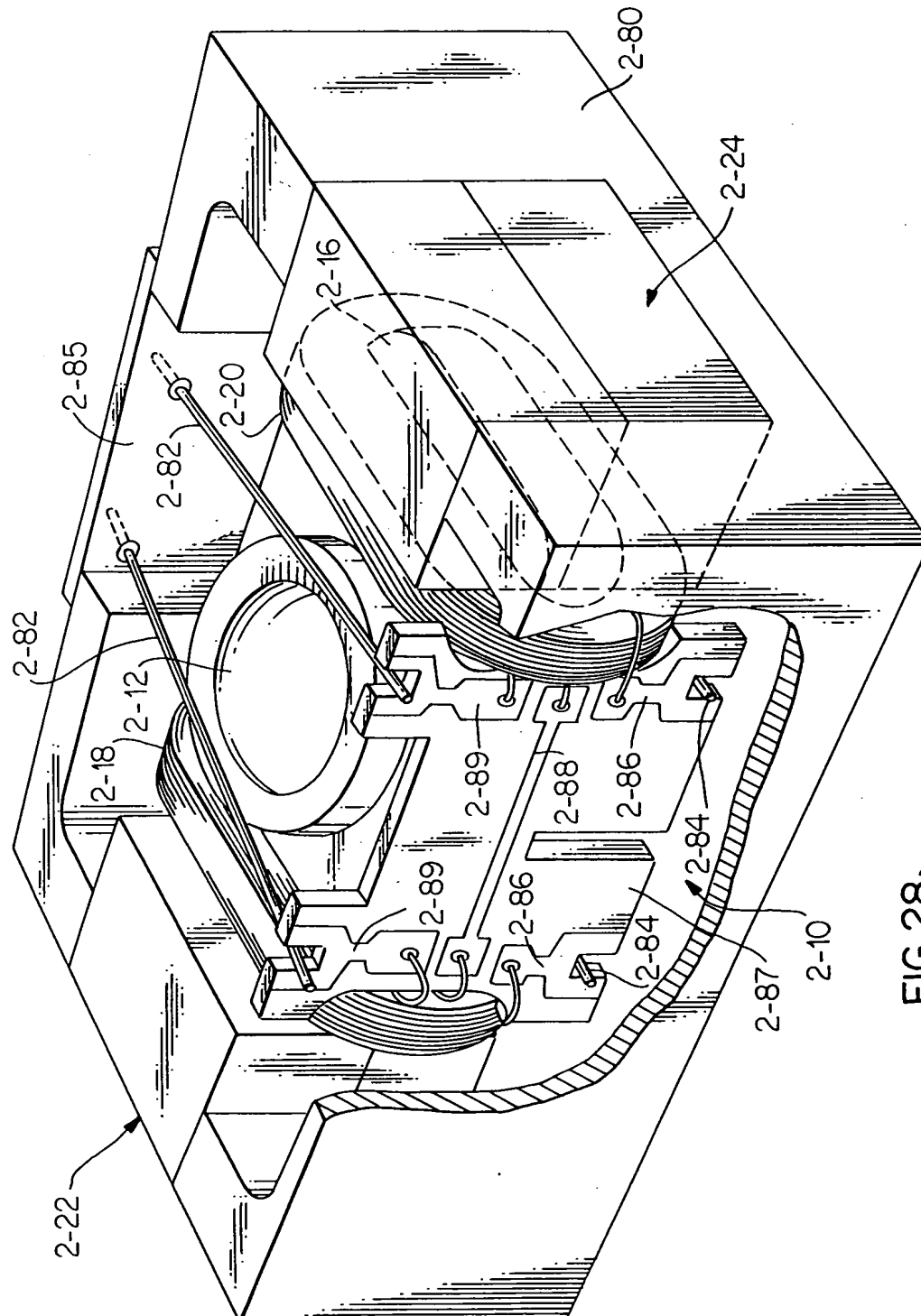


FIG. 28

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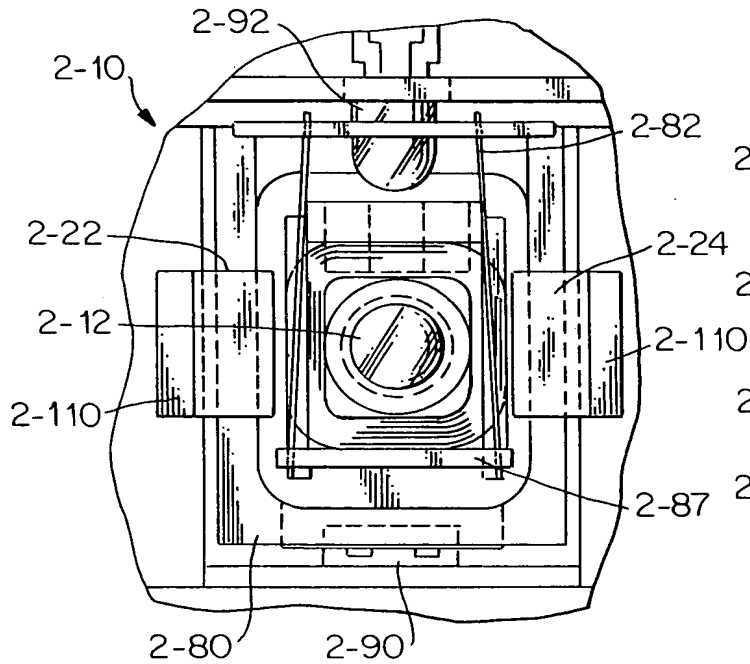


FIG. 29

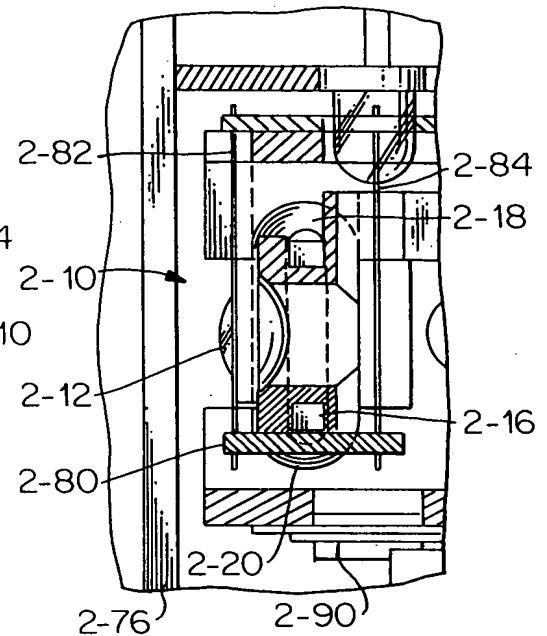


FIG. 30

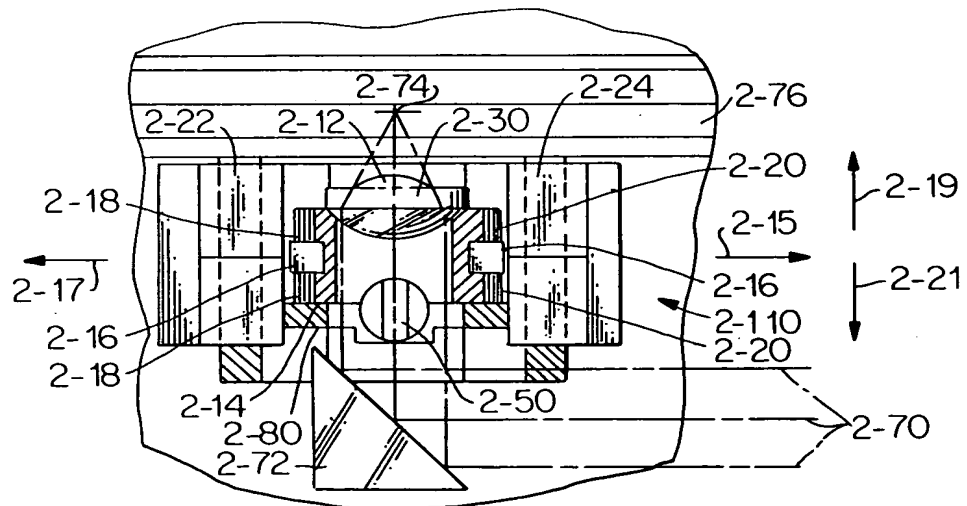
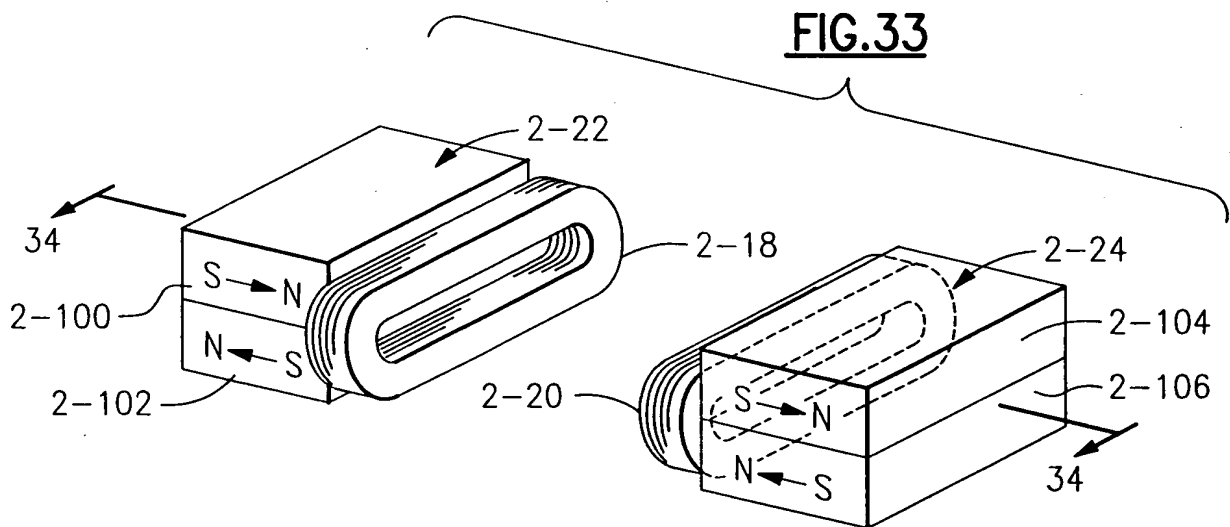
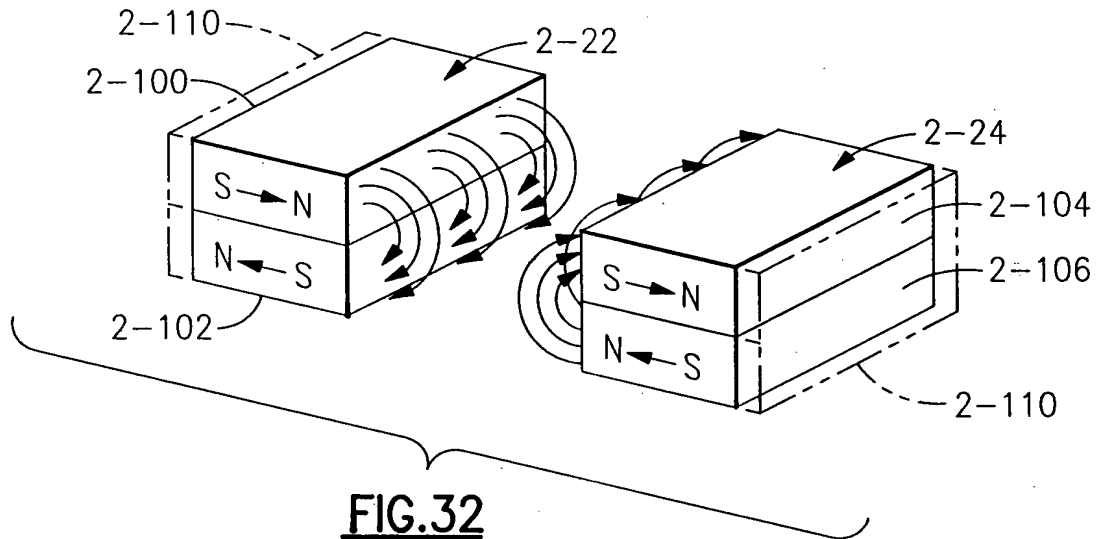


FIG. 31

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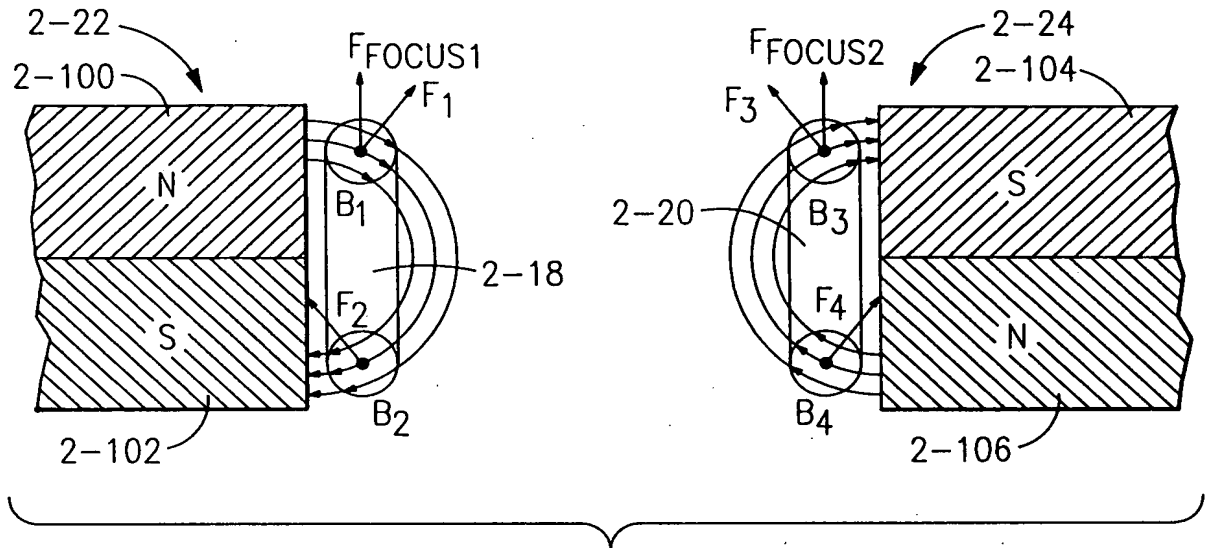


FIG.34

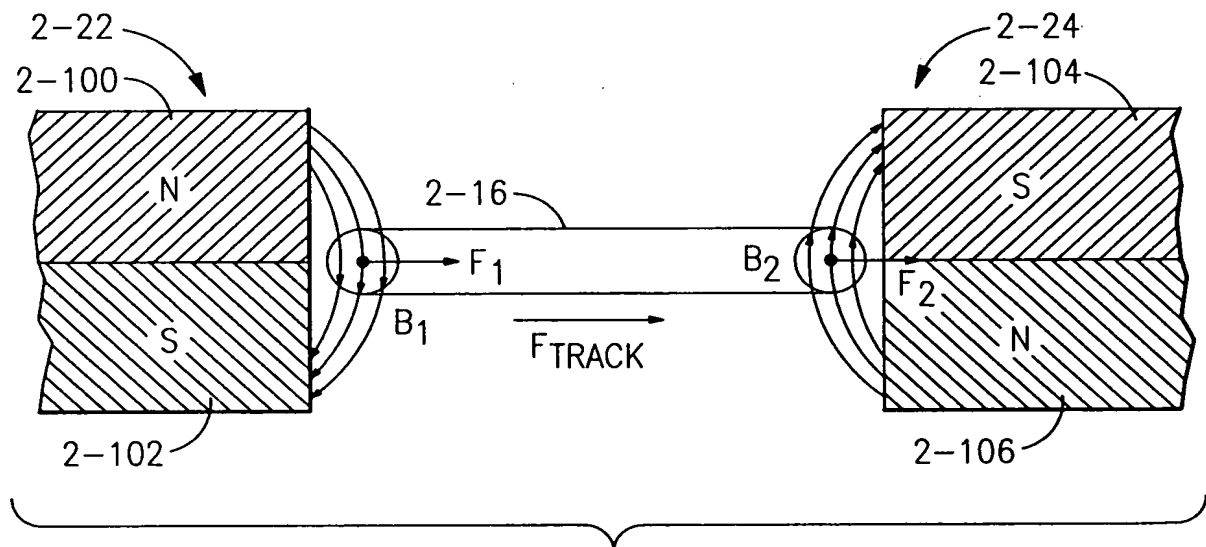
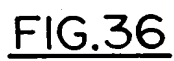
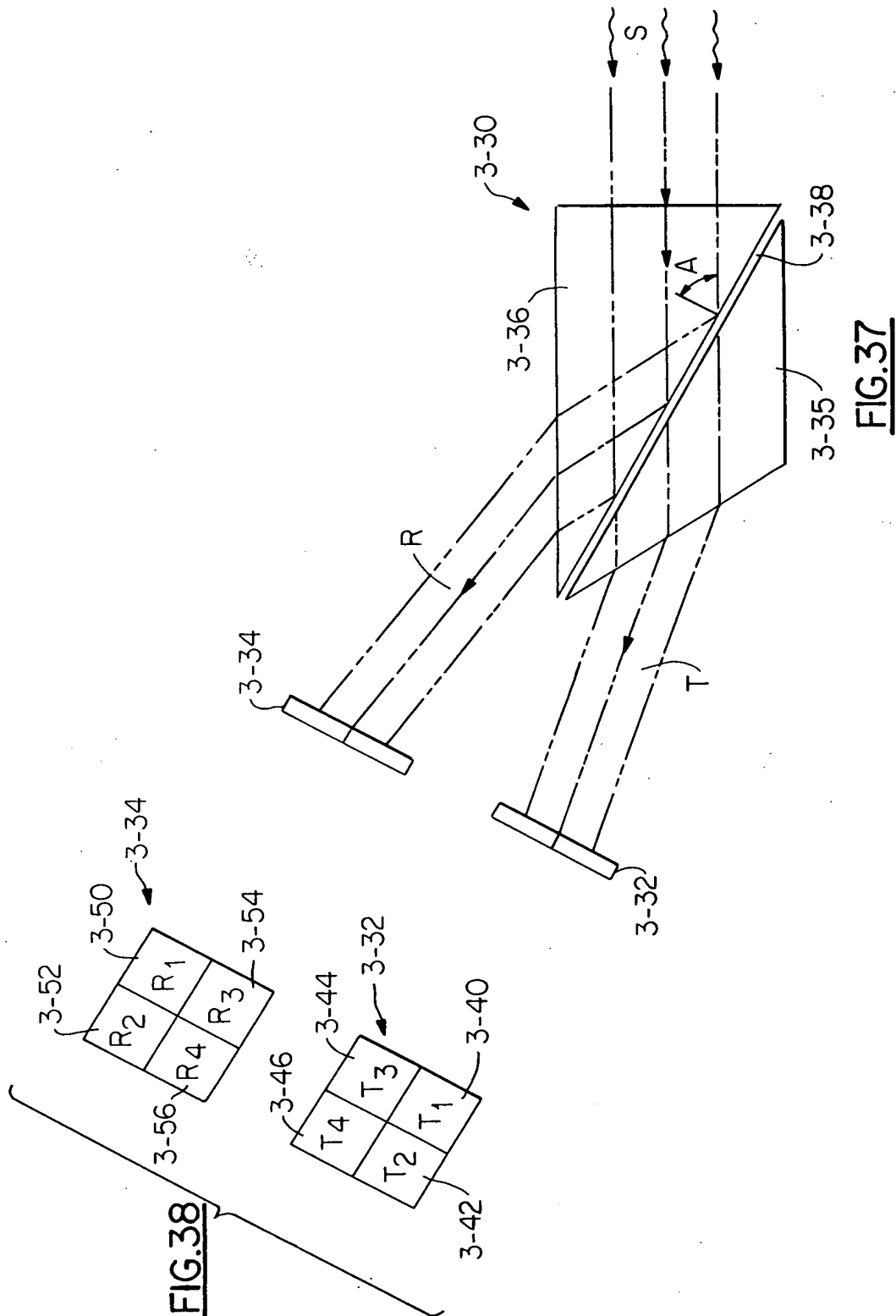
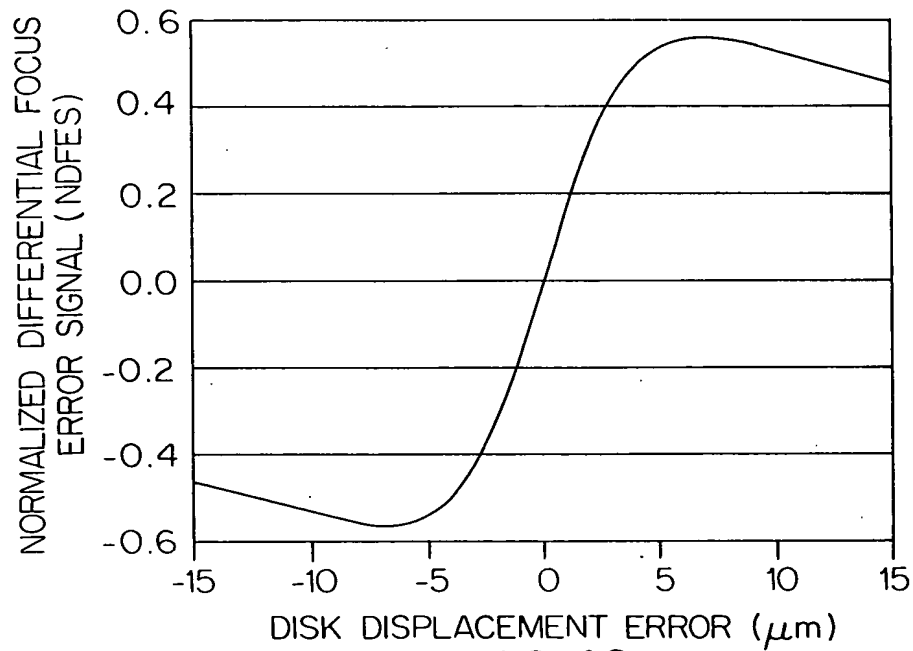
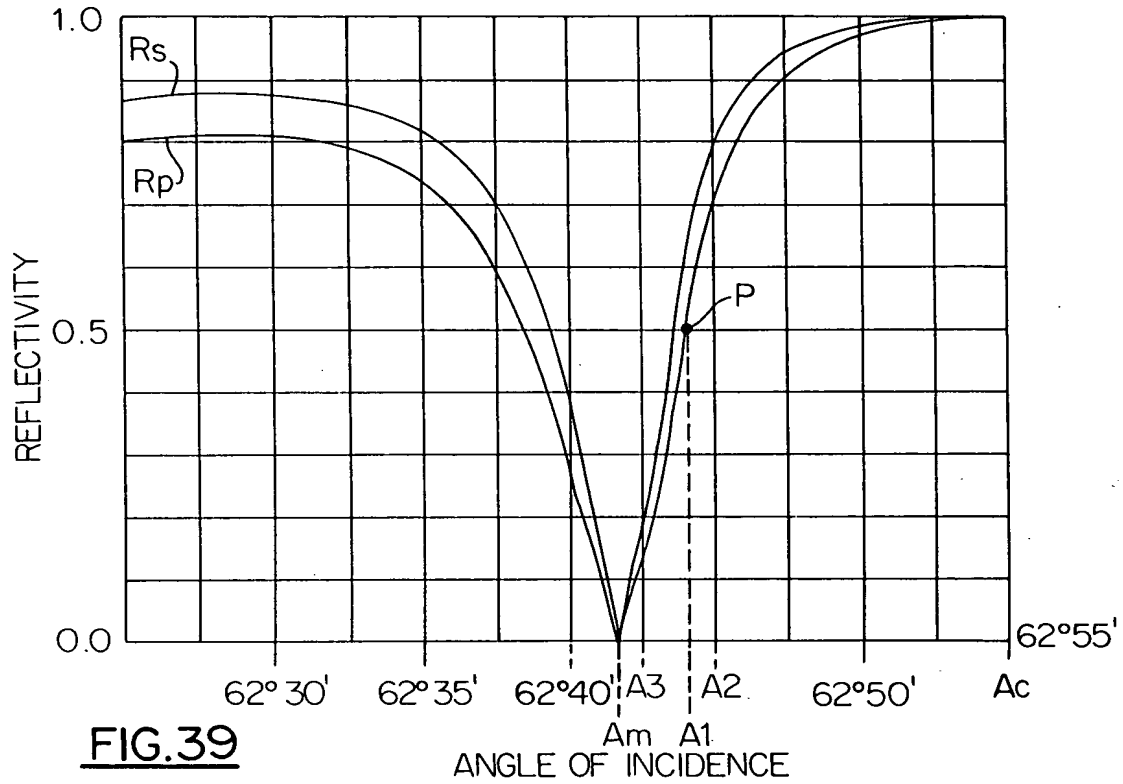


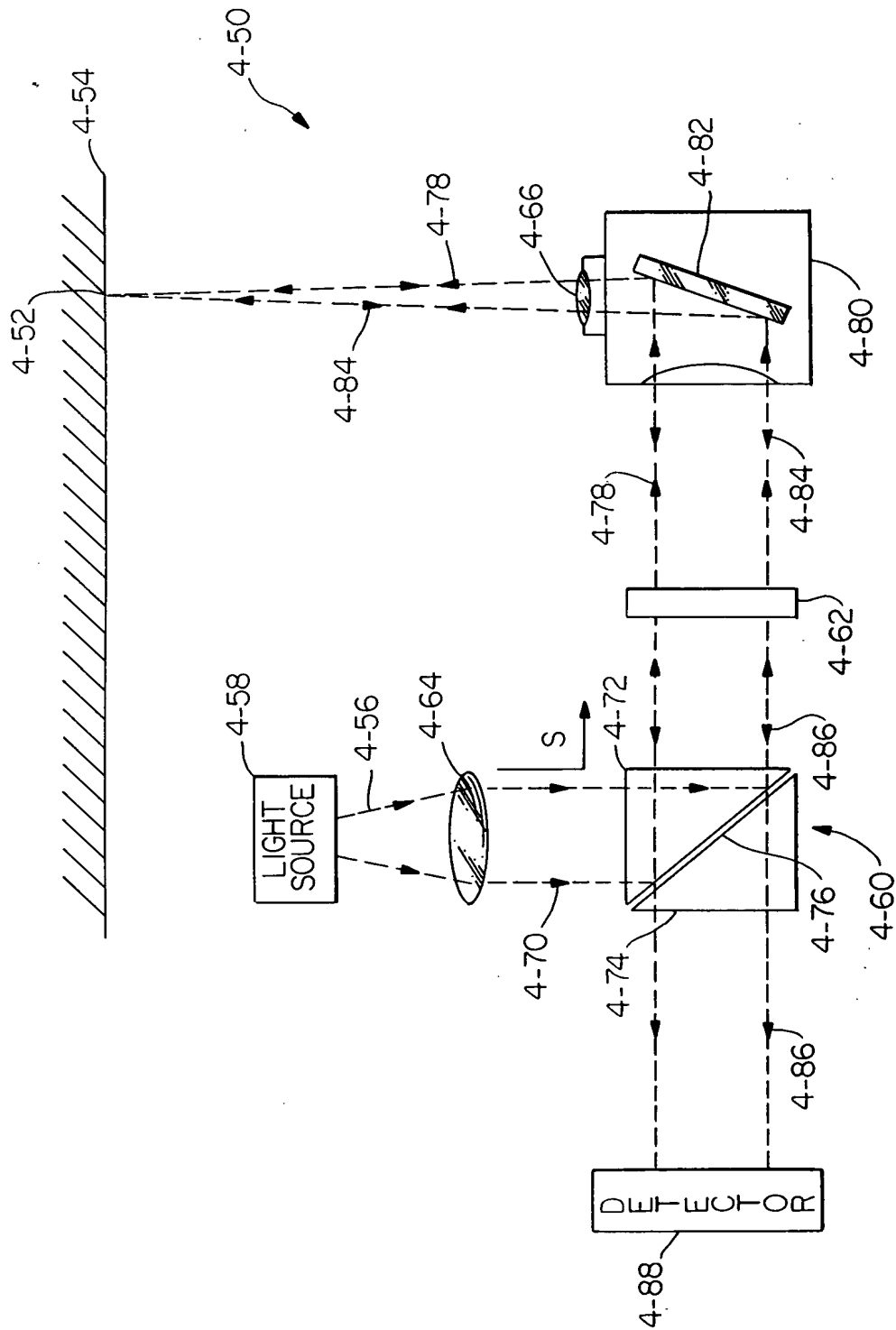
FIG.35

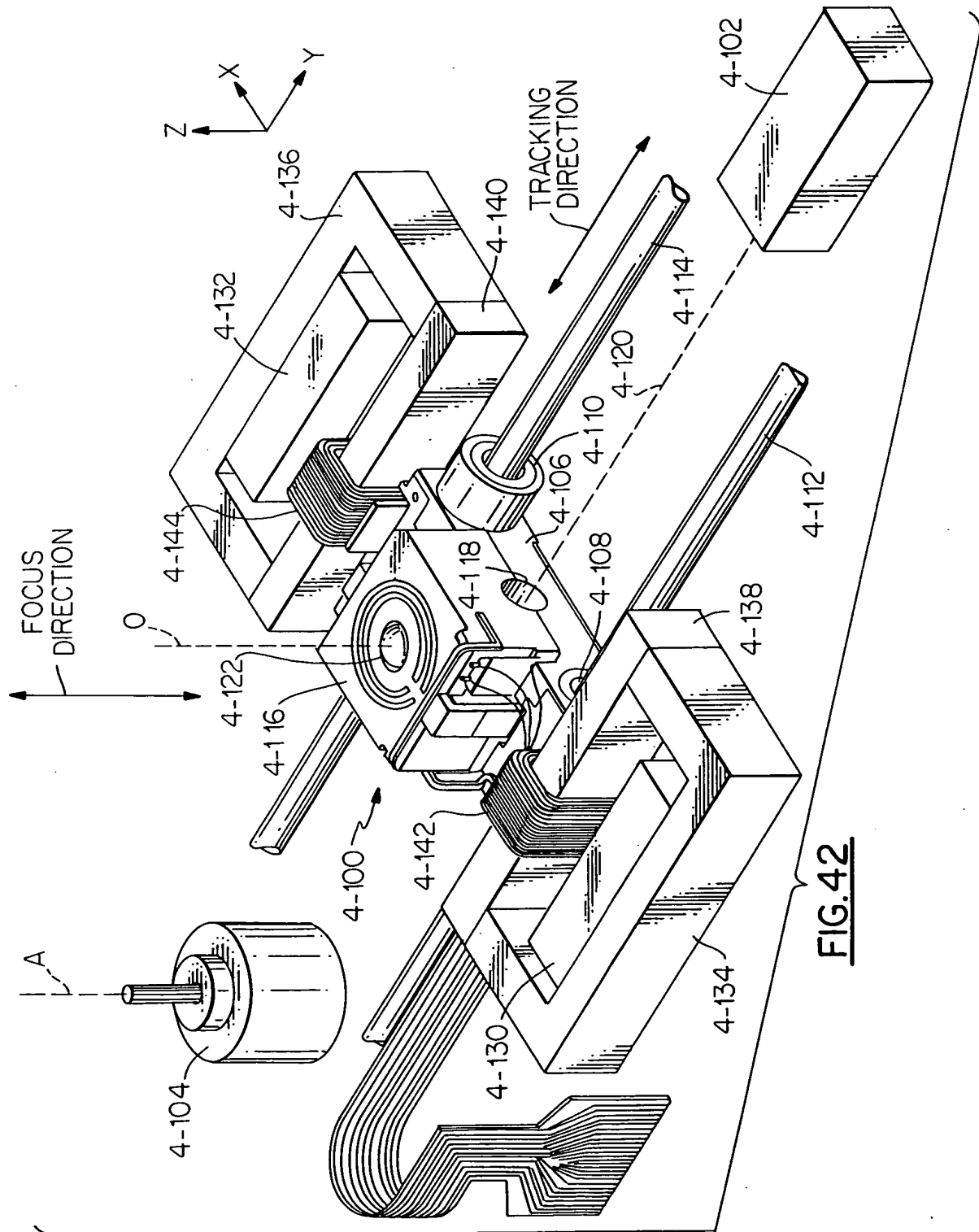




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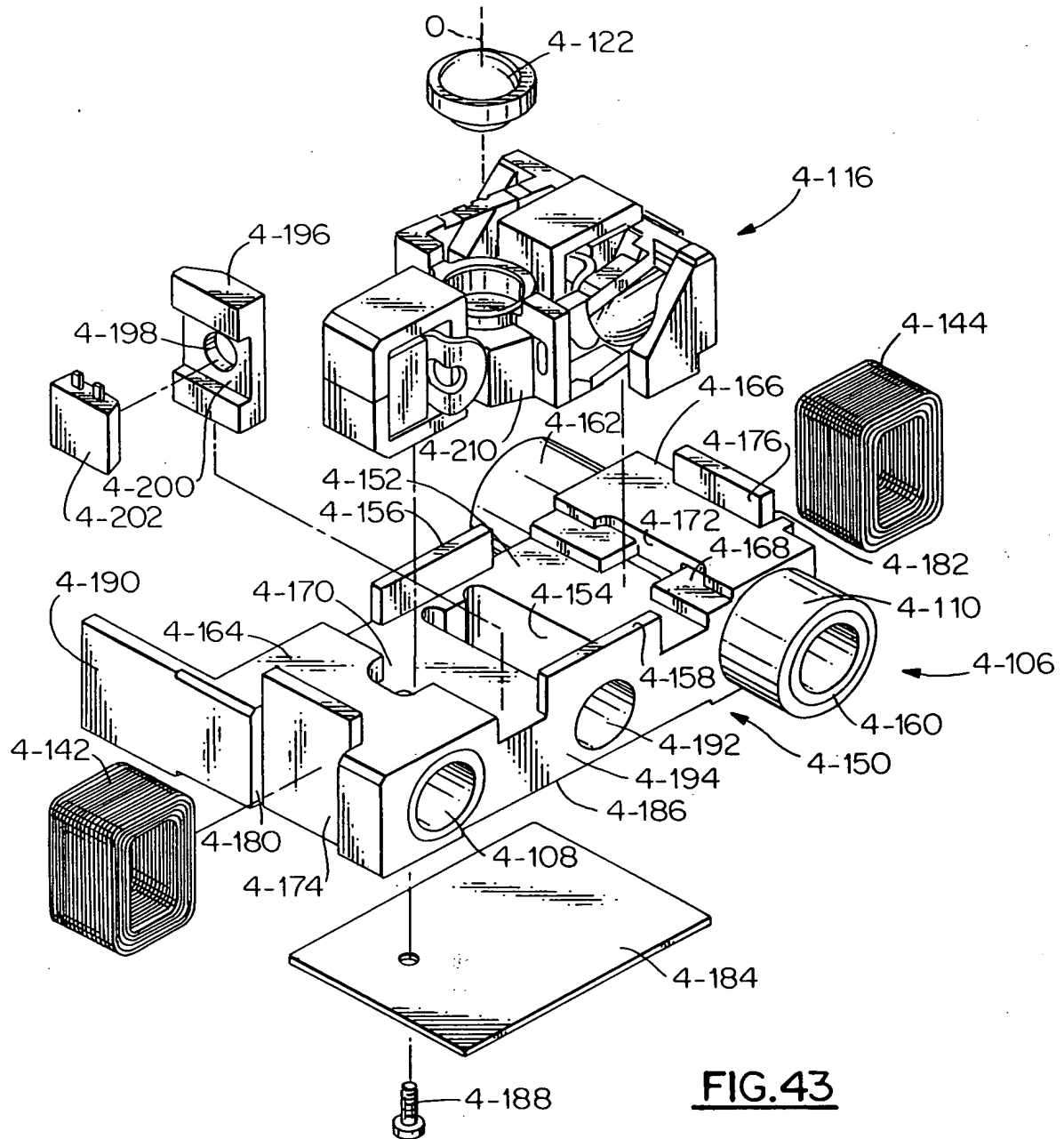


FIG.43

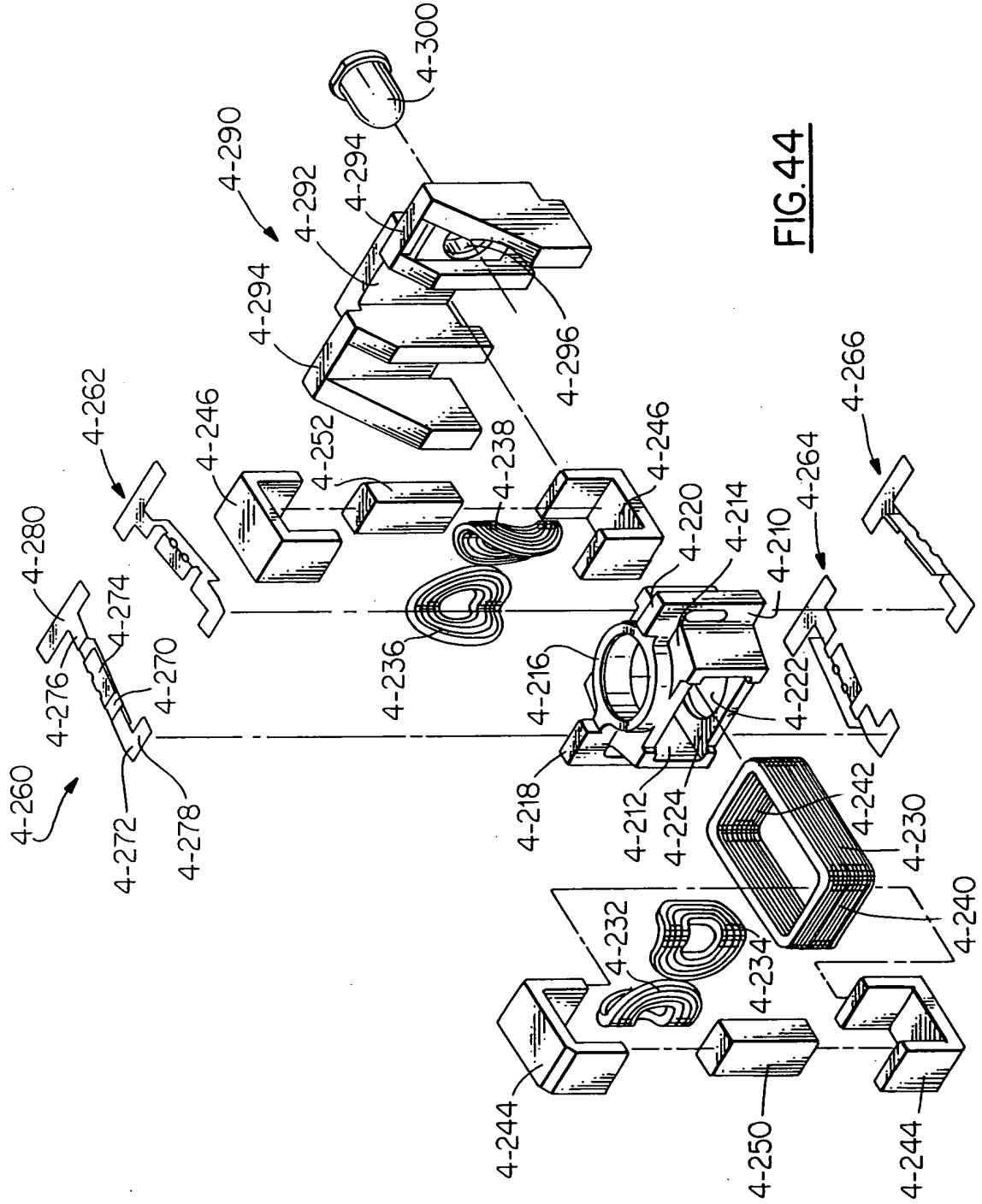


FIG. 44

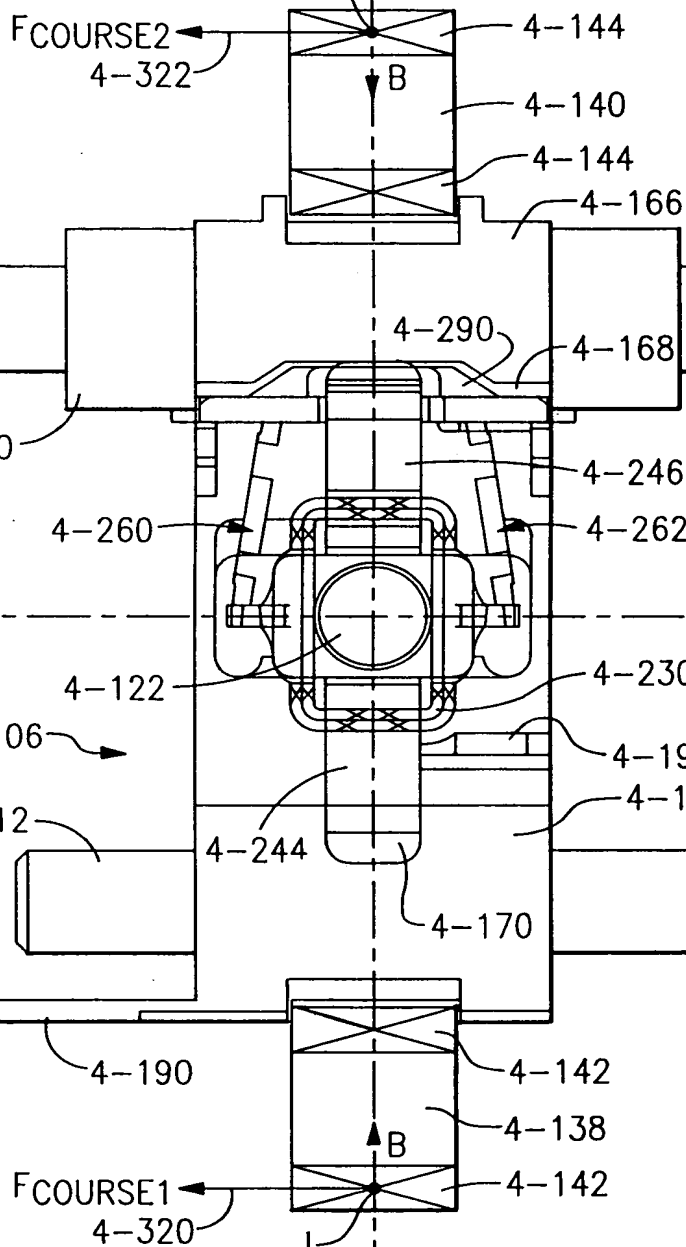


FIG. 45

FIG. 49B

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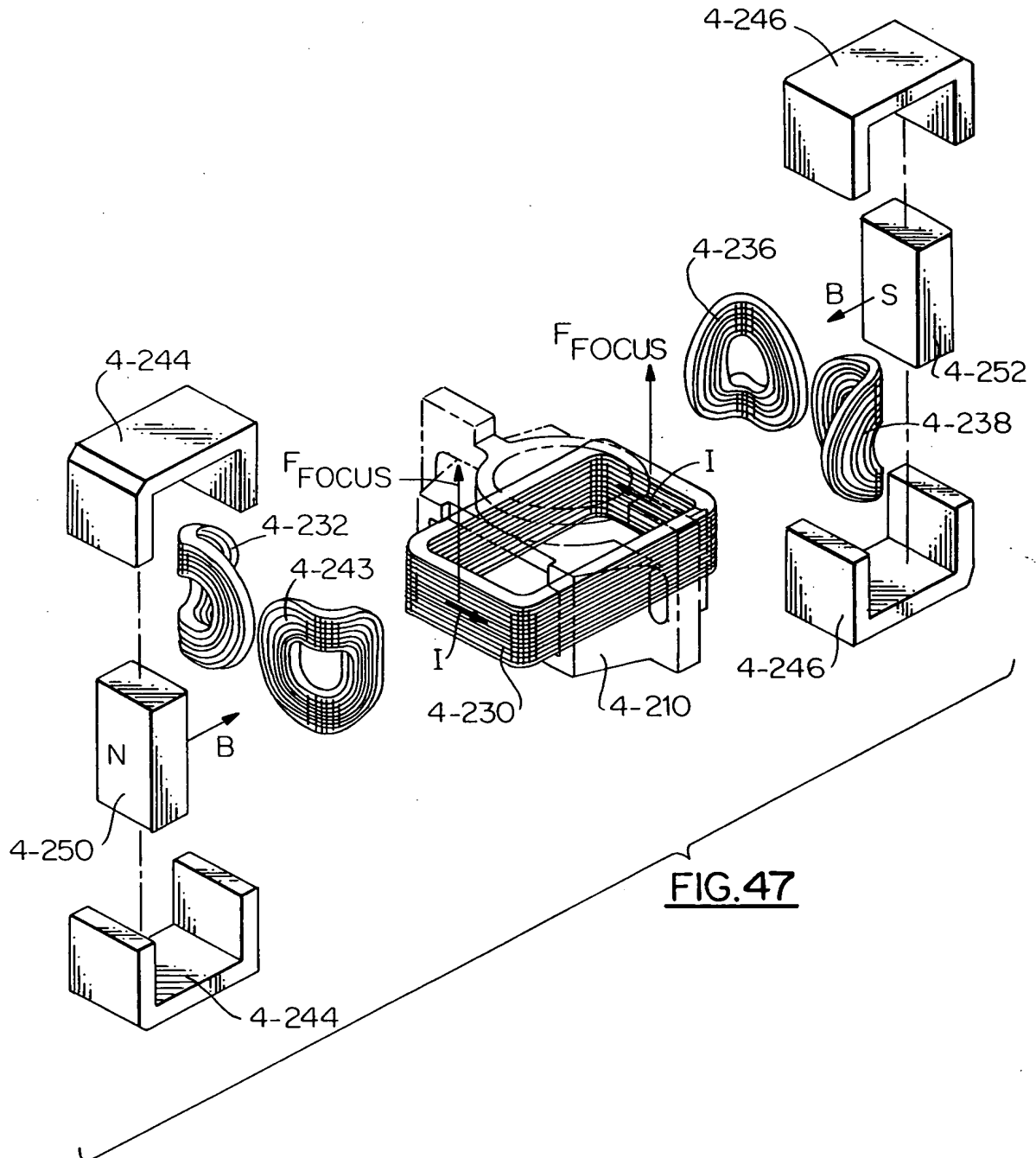
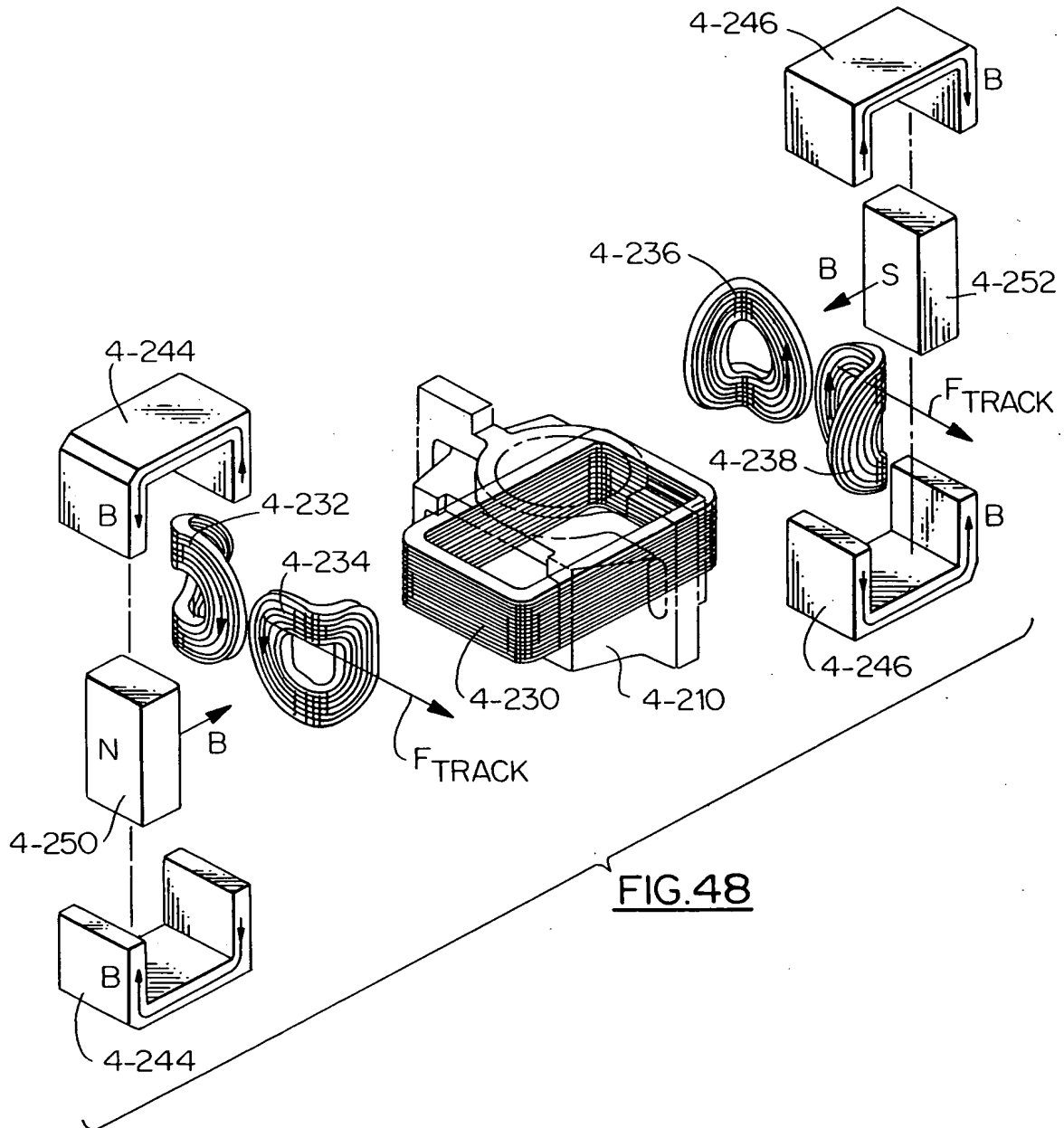


FIG. 47



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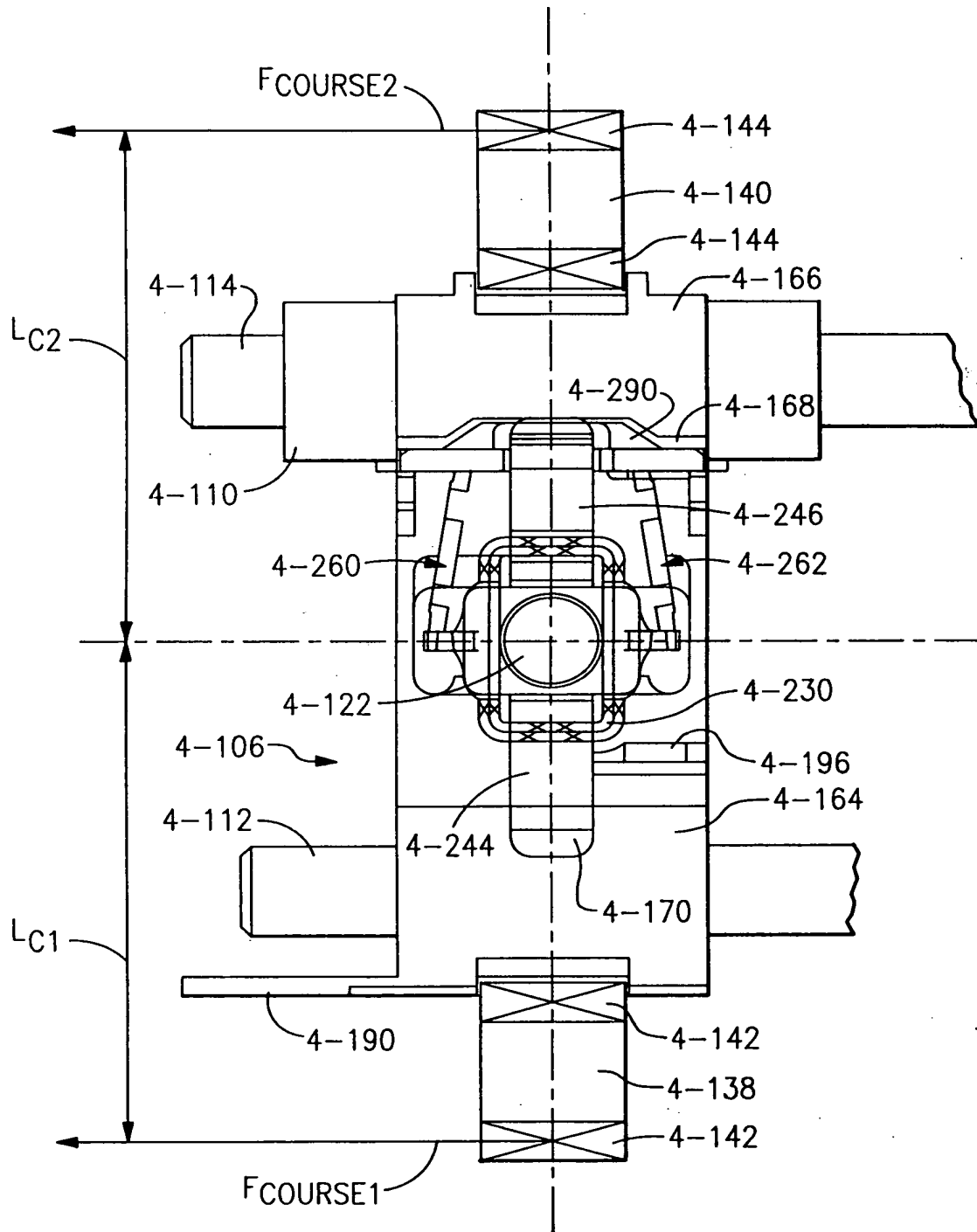


FIG.49A

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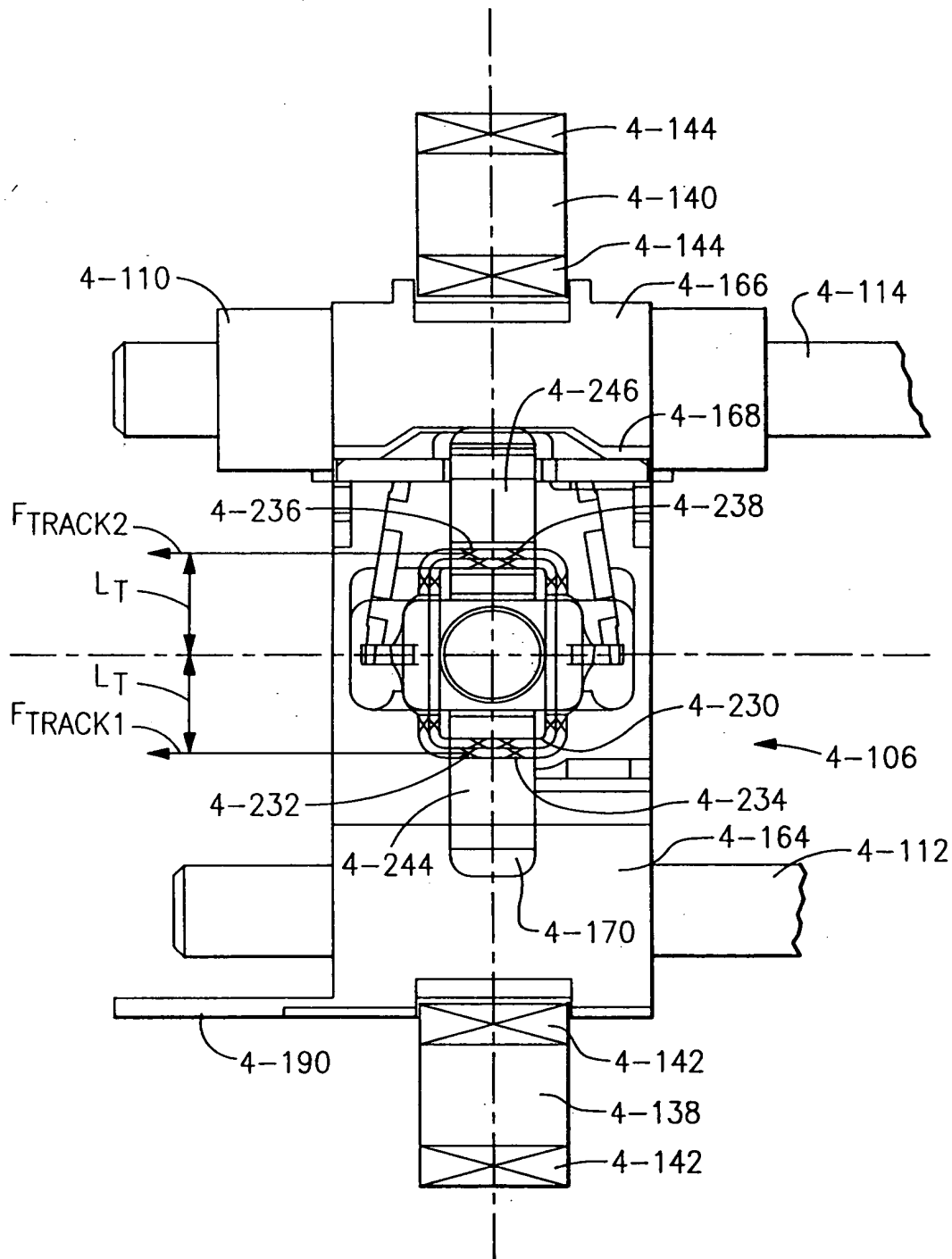


FIG. 50A

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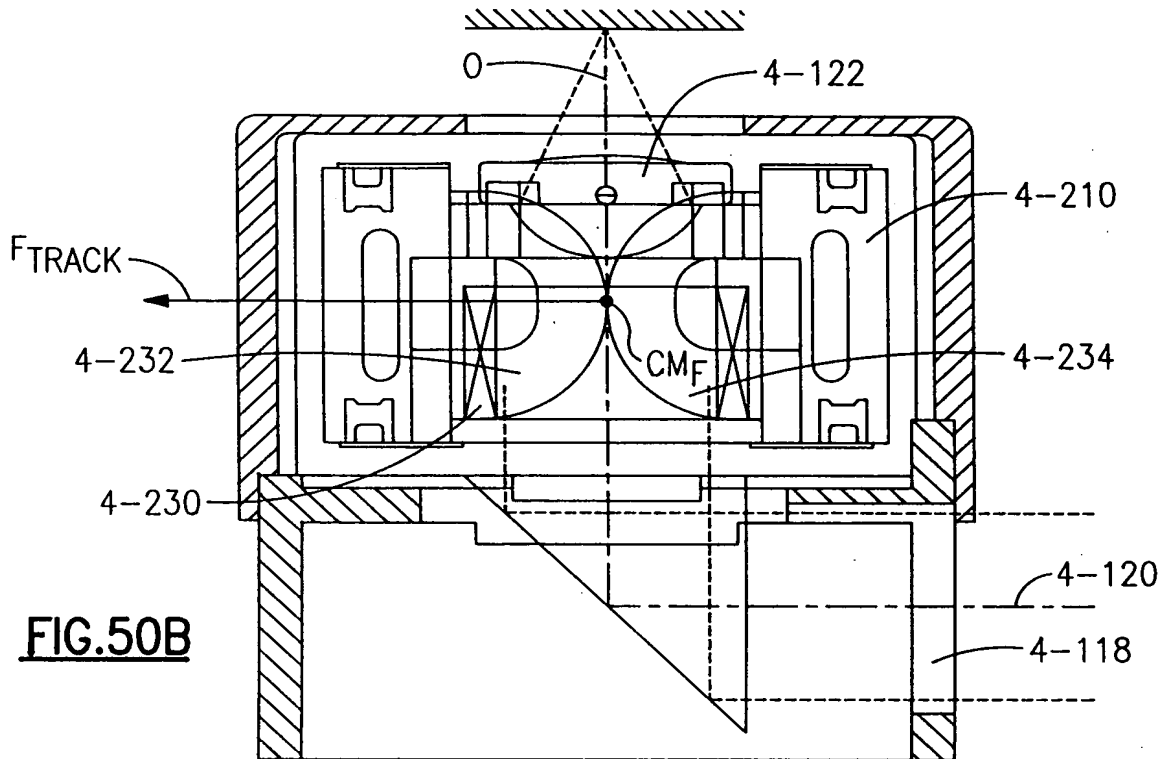


FIG. 50B

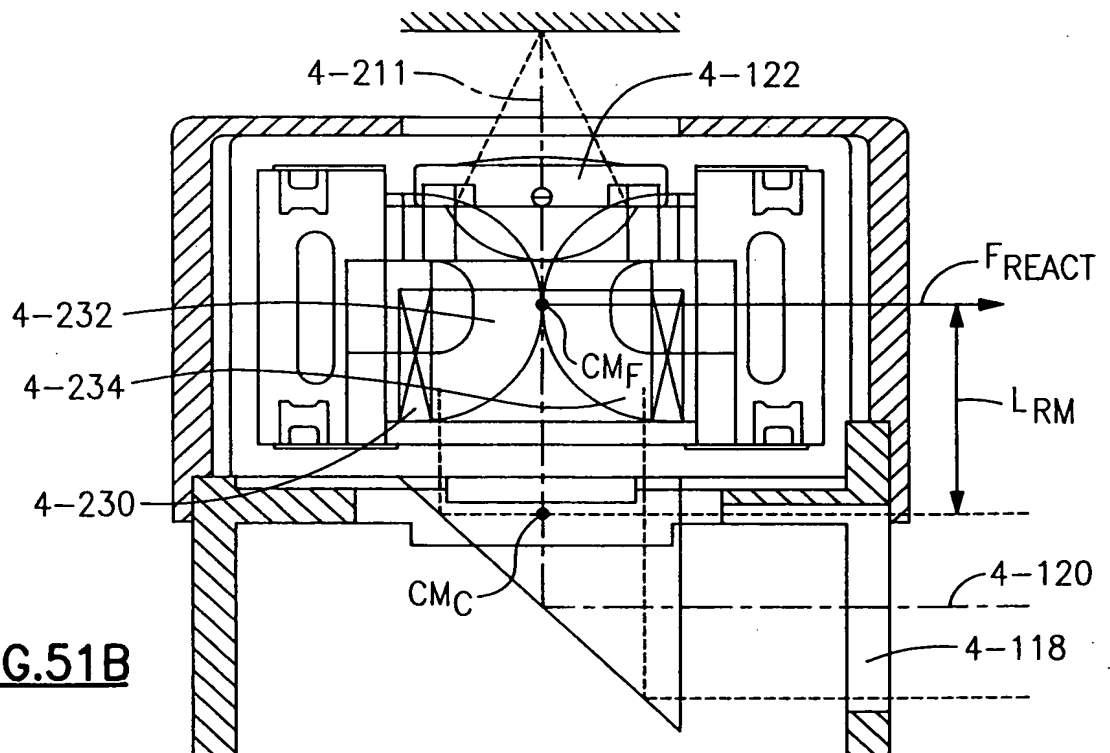


FIG. 51B

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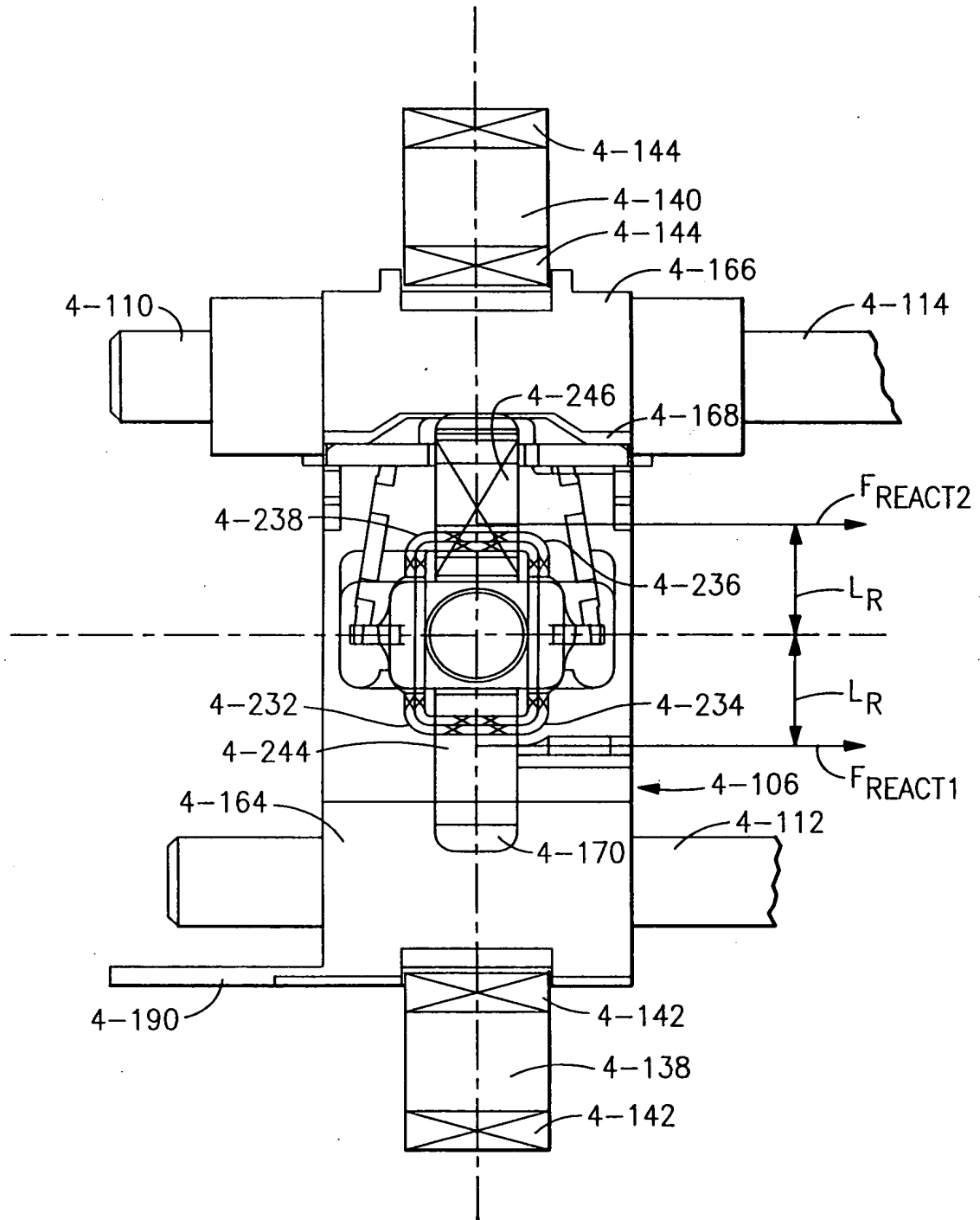
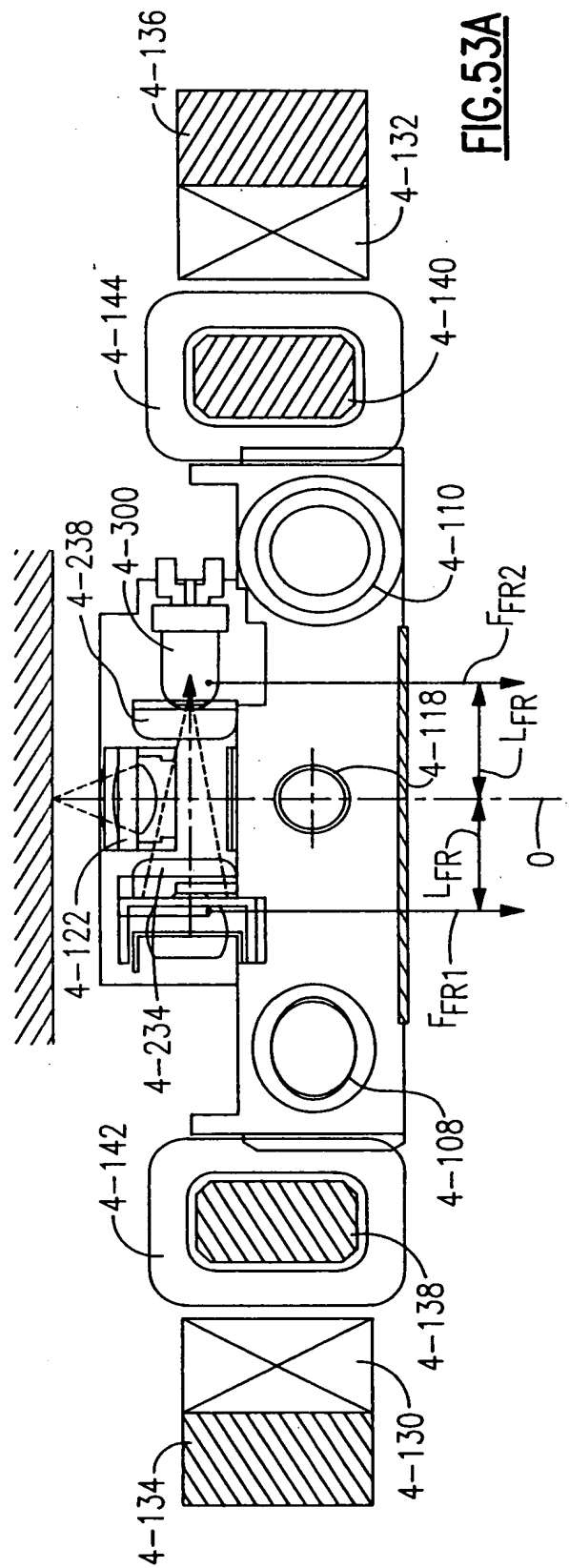
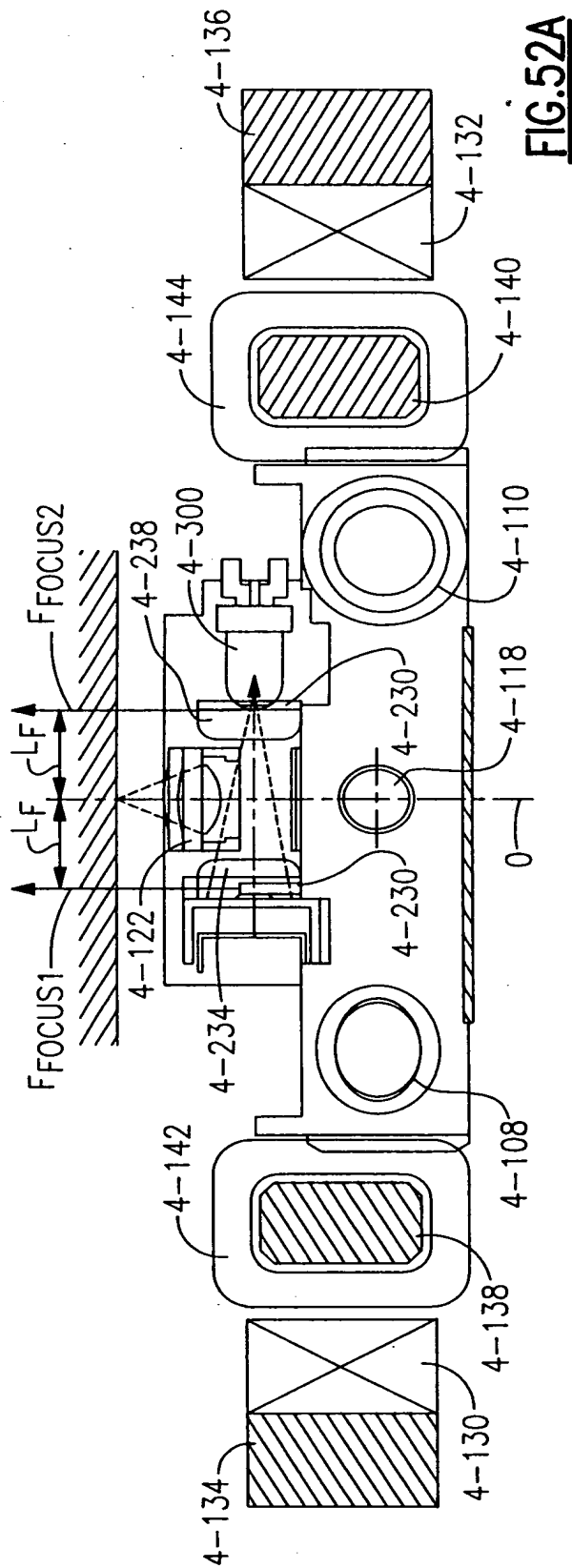
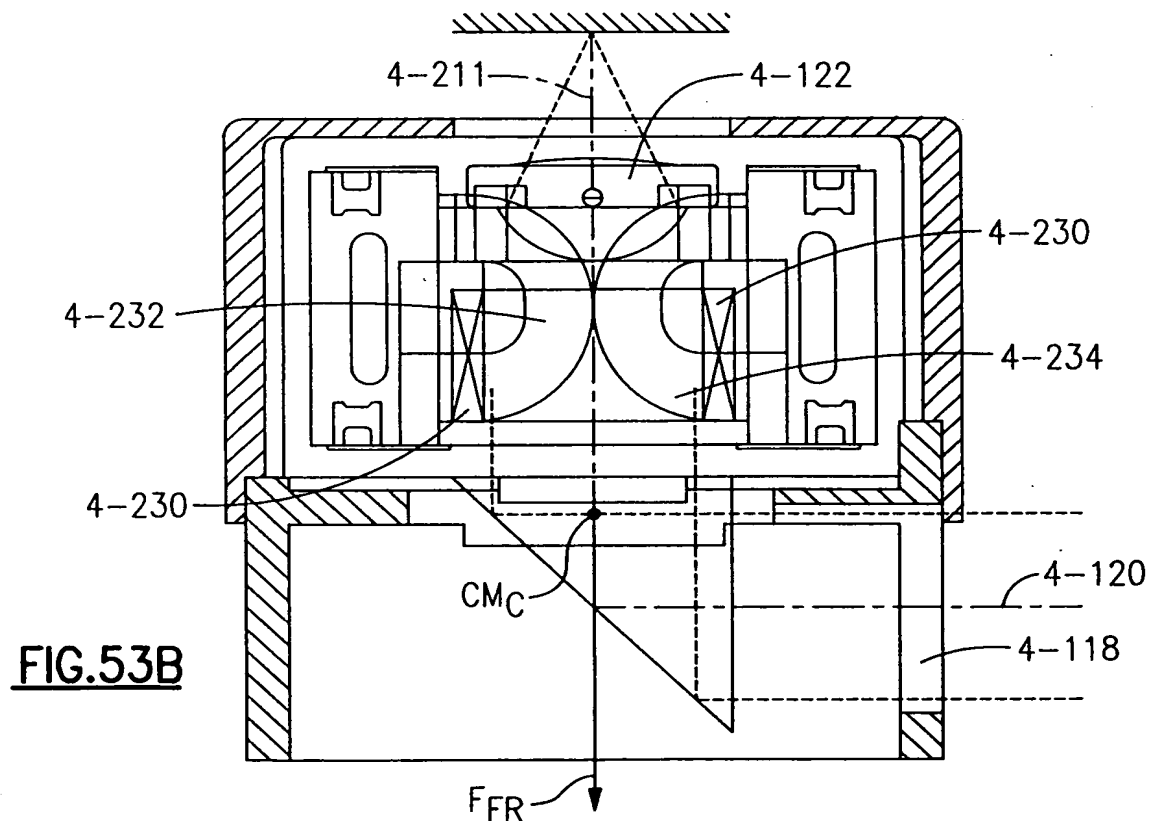
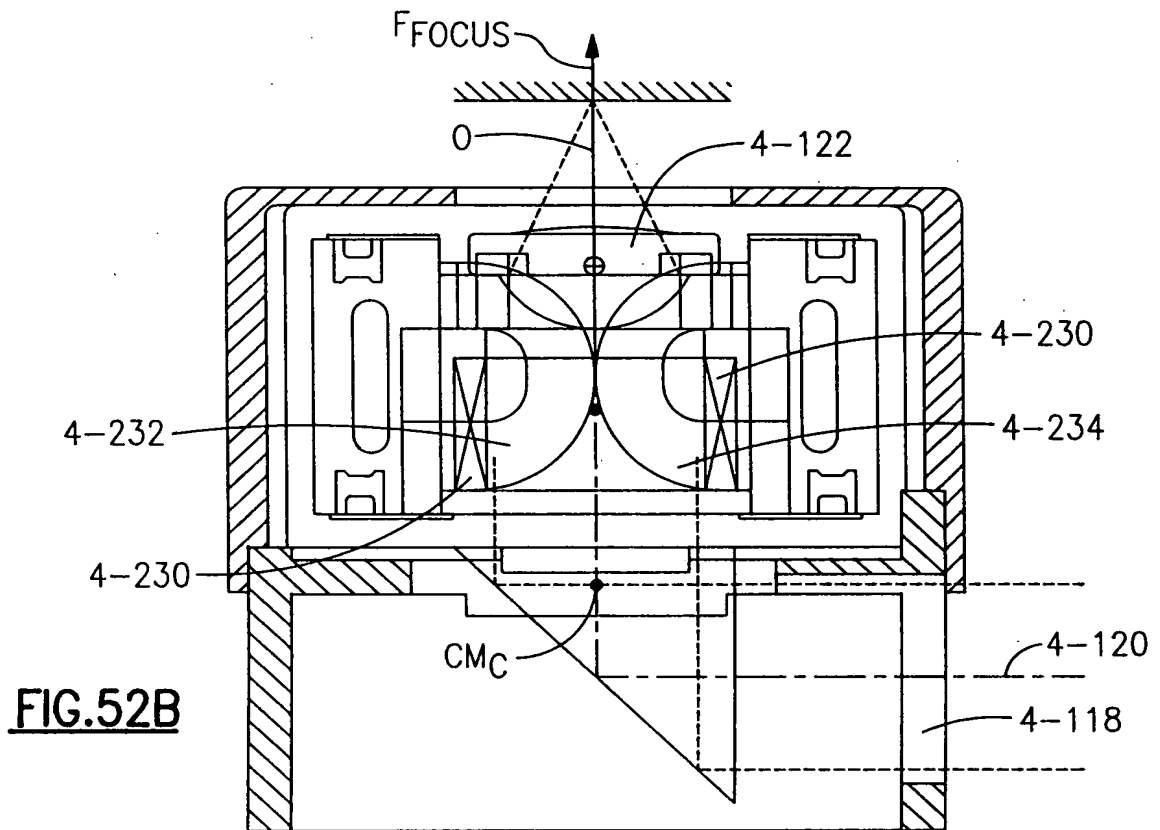


FIG.51A

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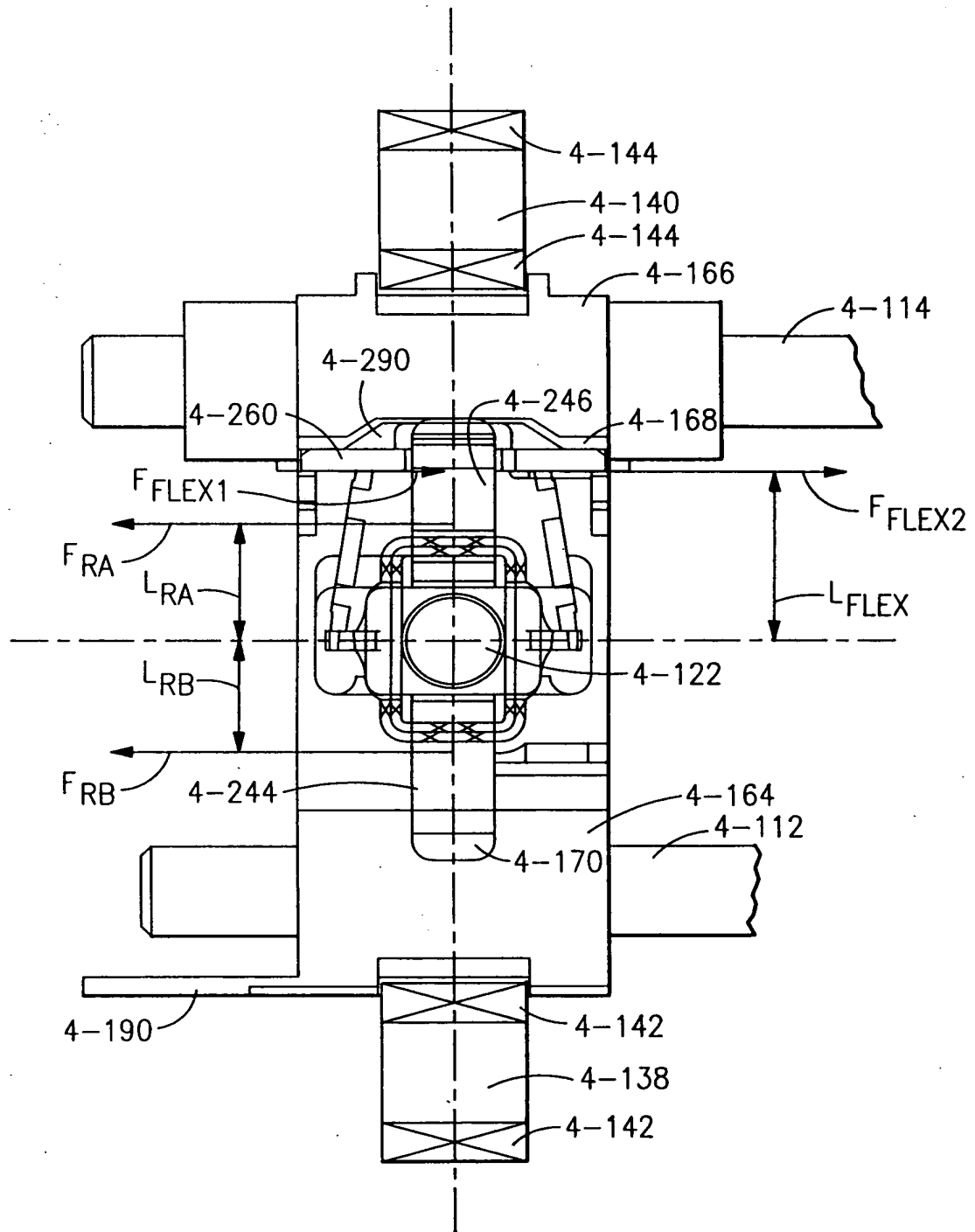


FIG.54

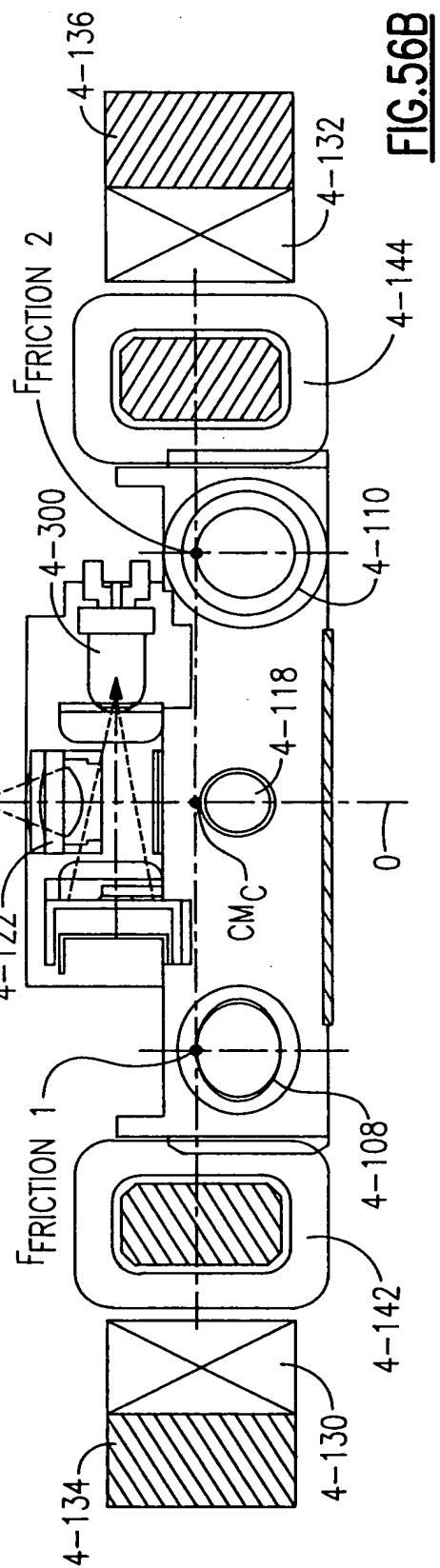
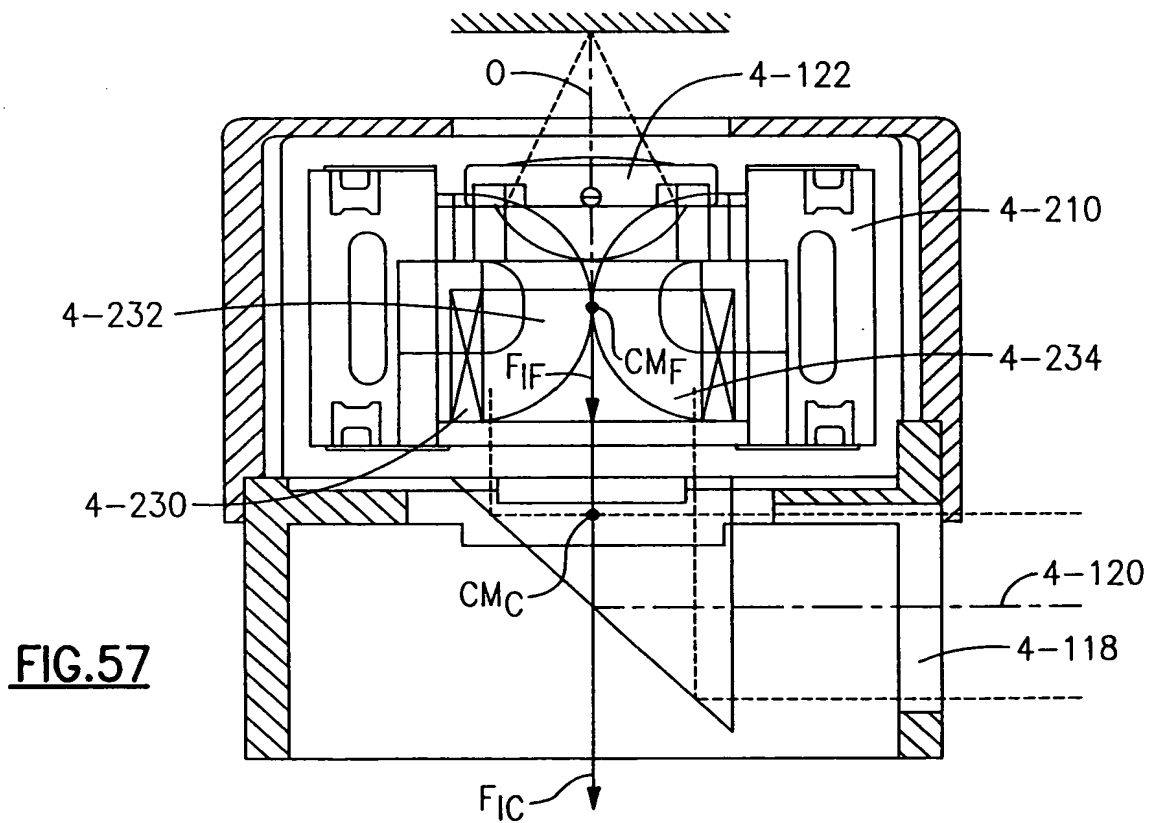
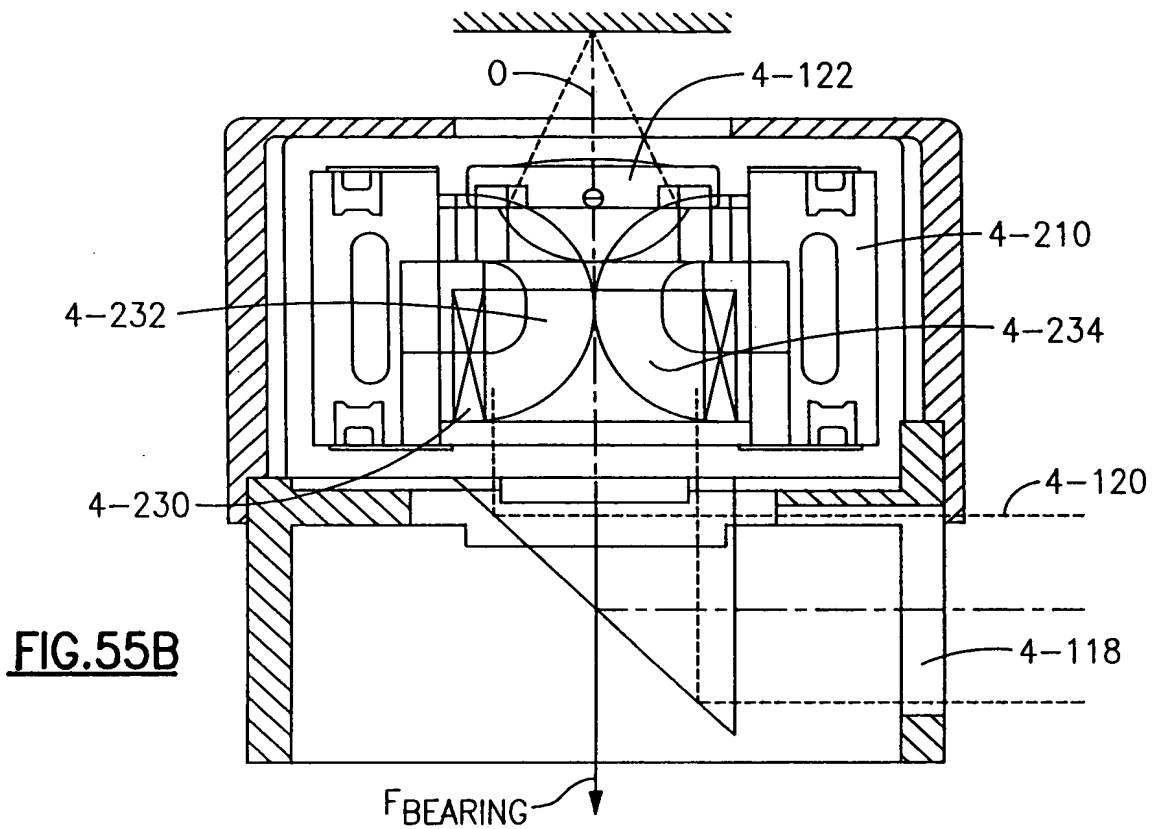


FIG. 56B

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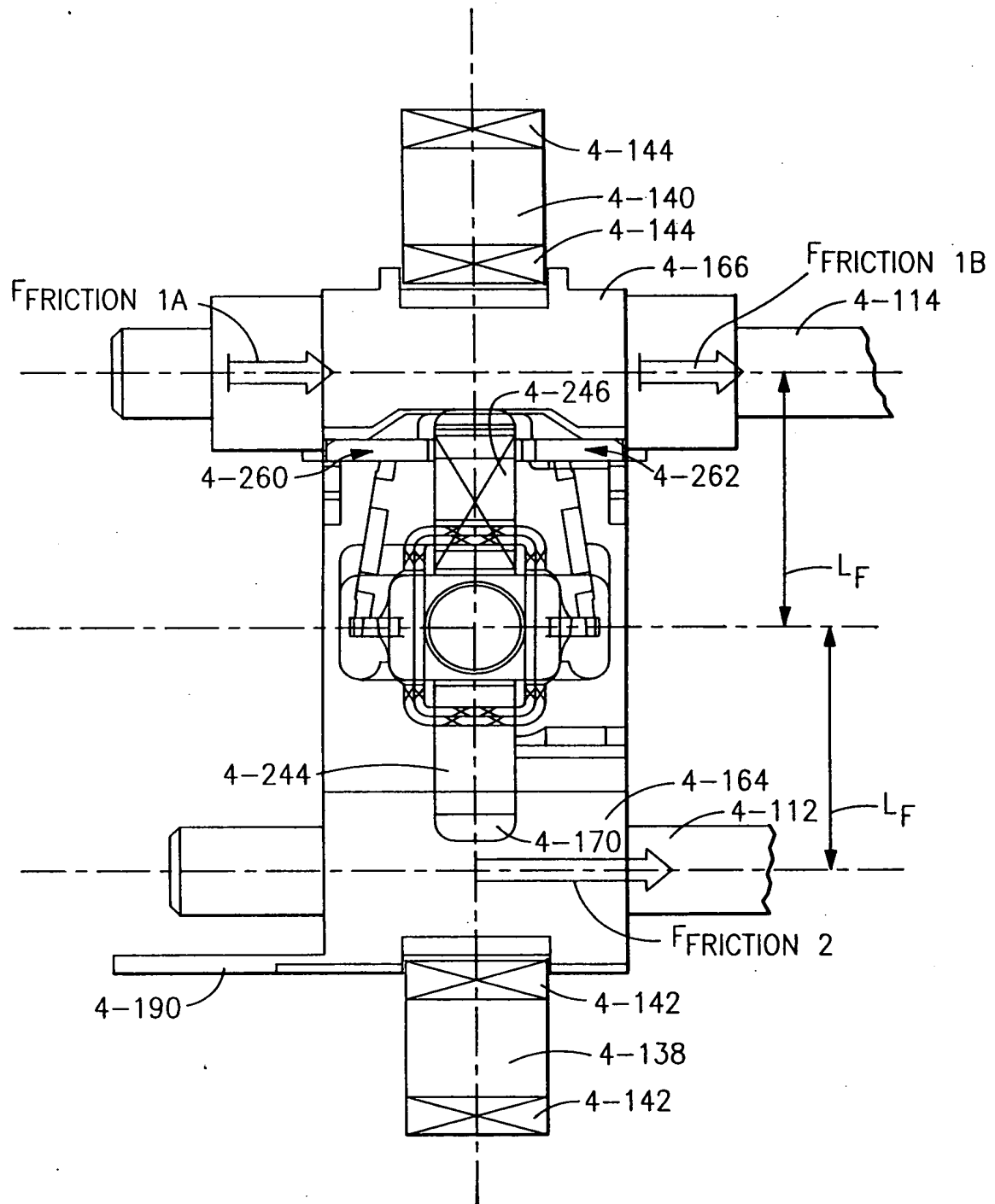
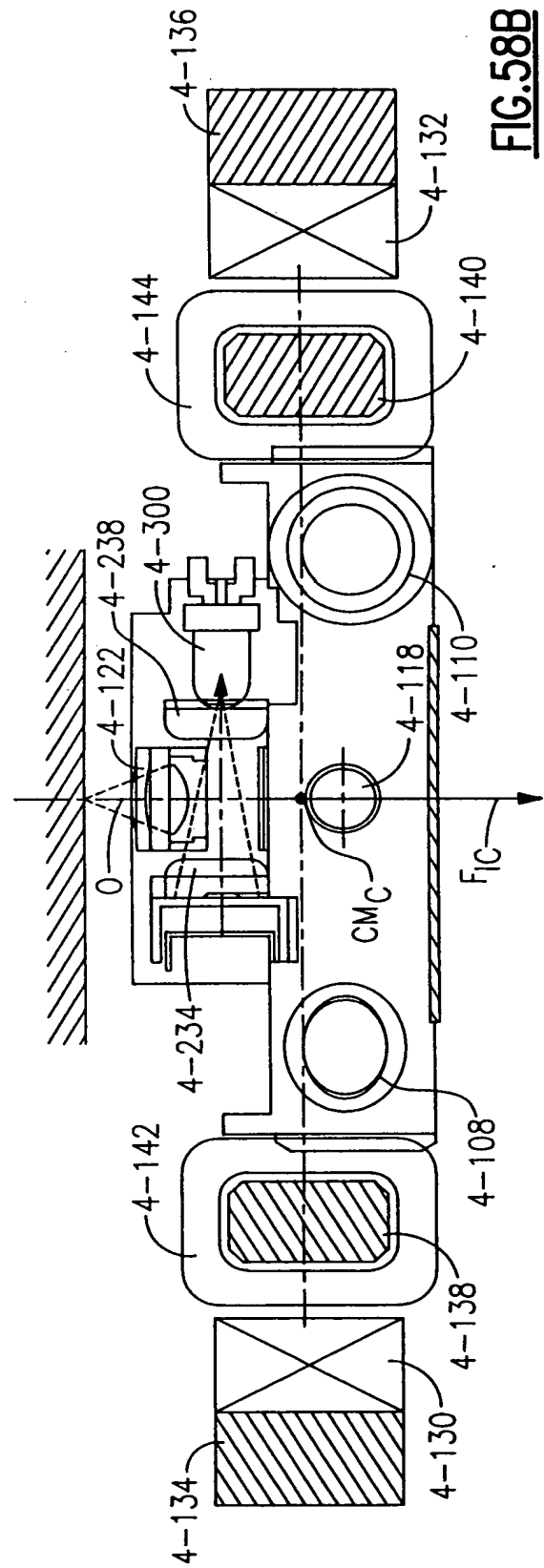


FIG.56A



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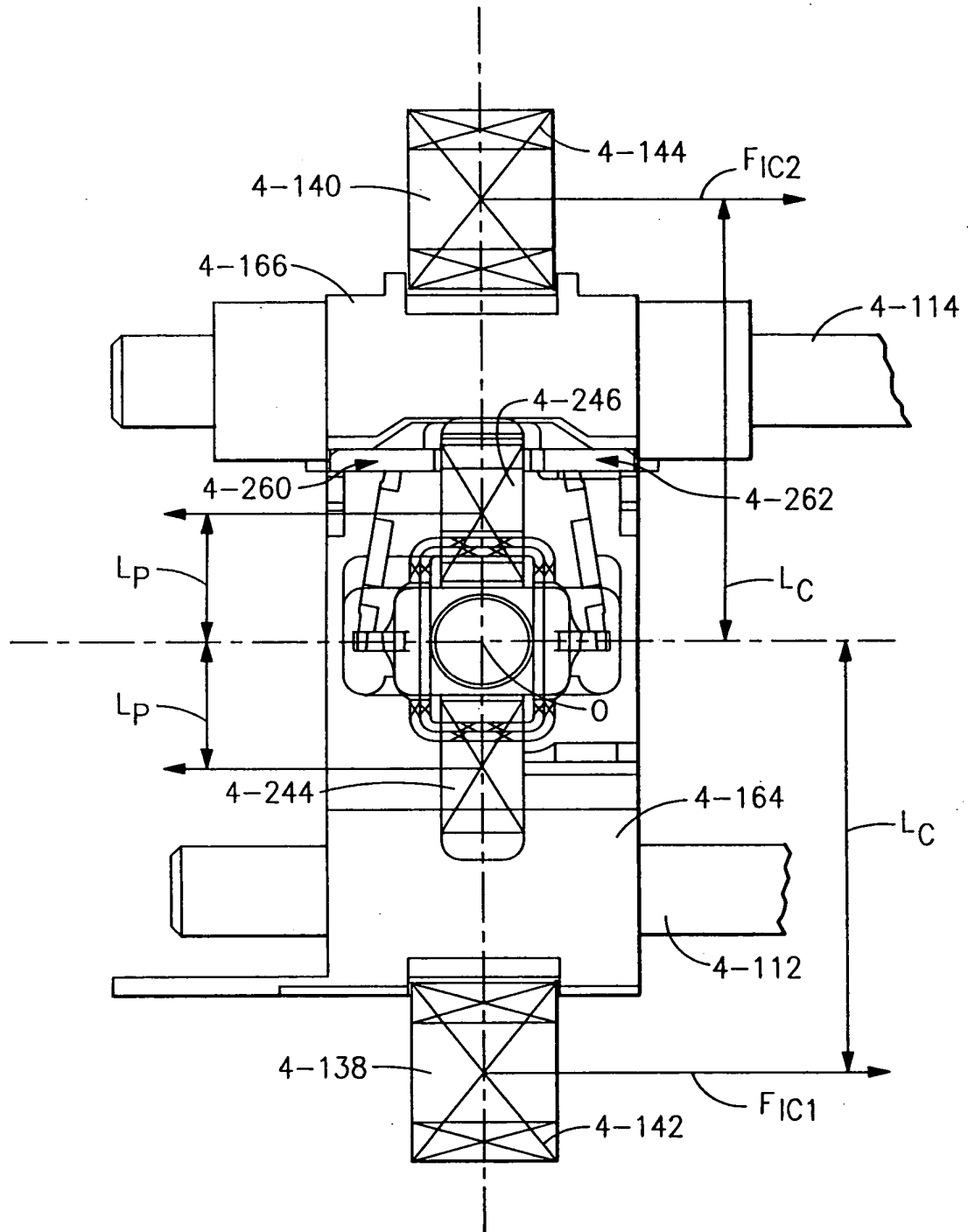


FIG. 59A

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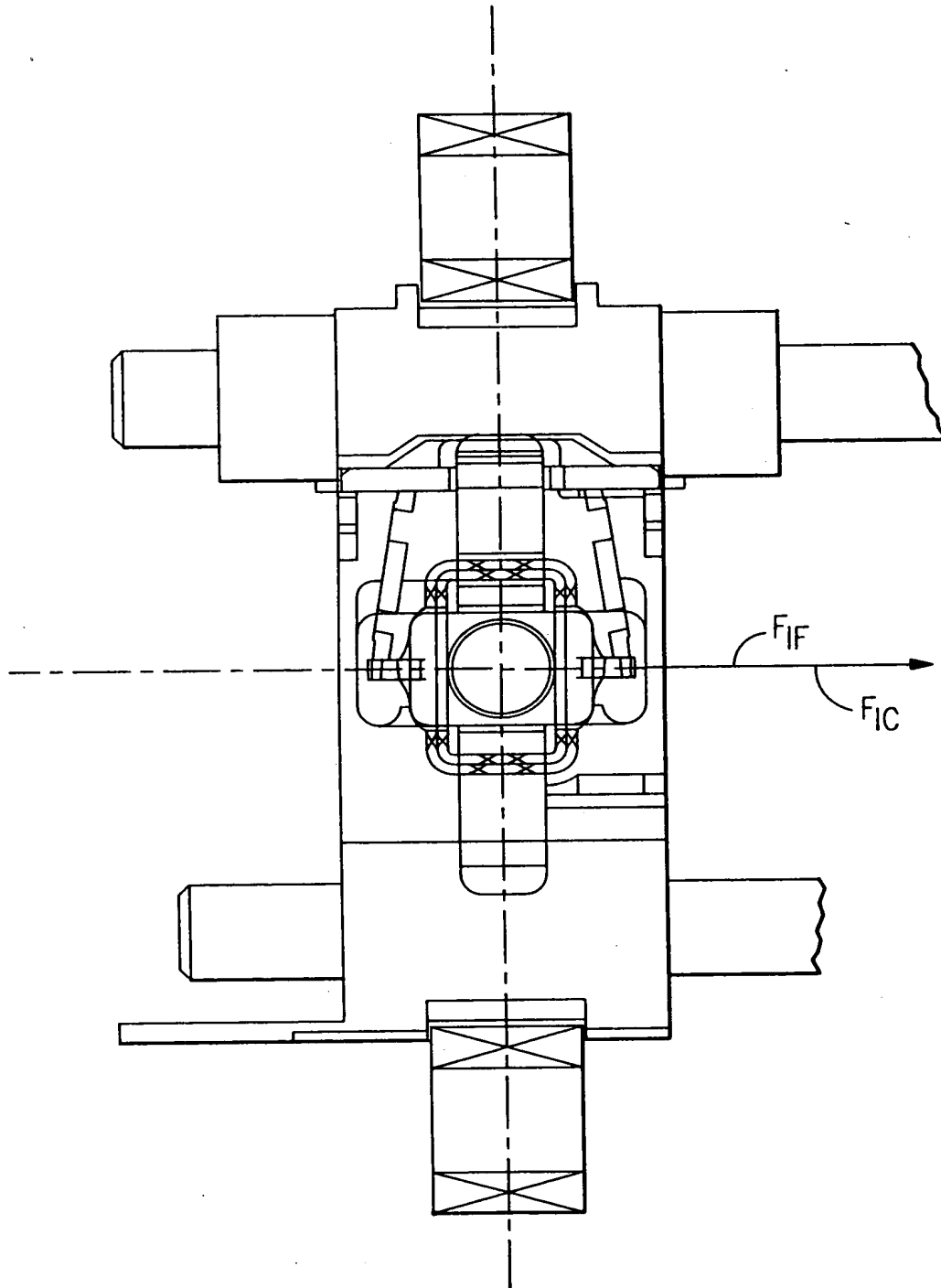
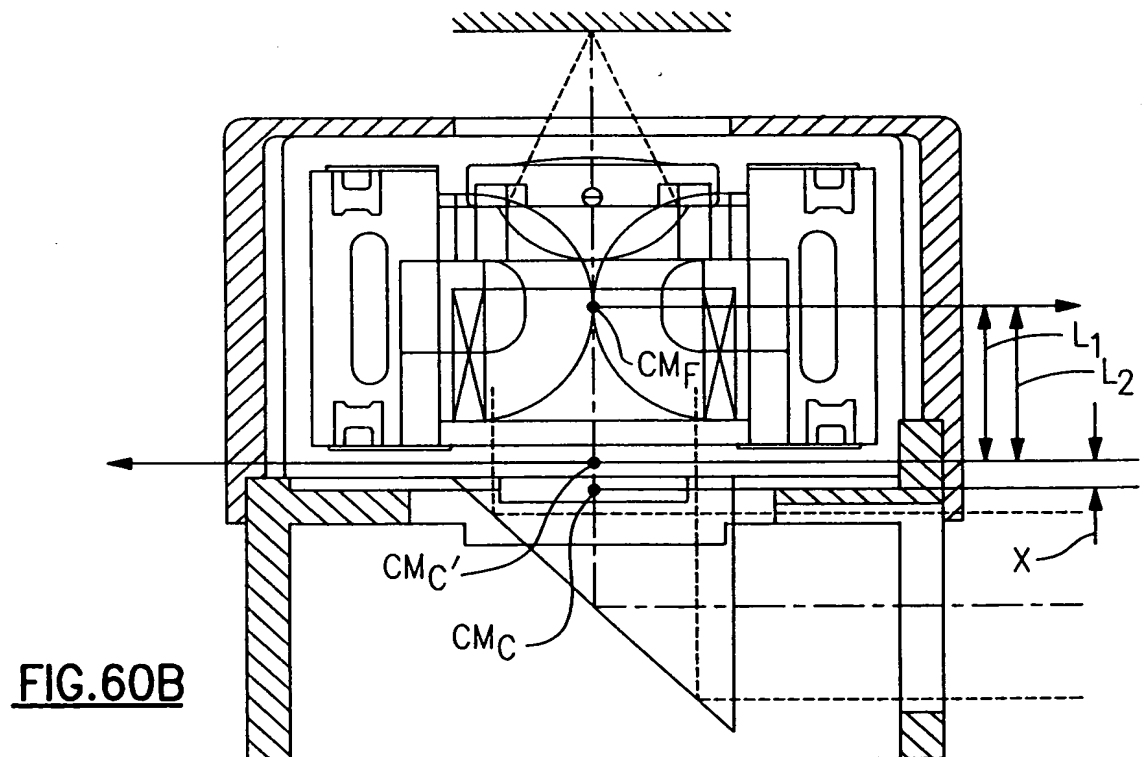
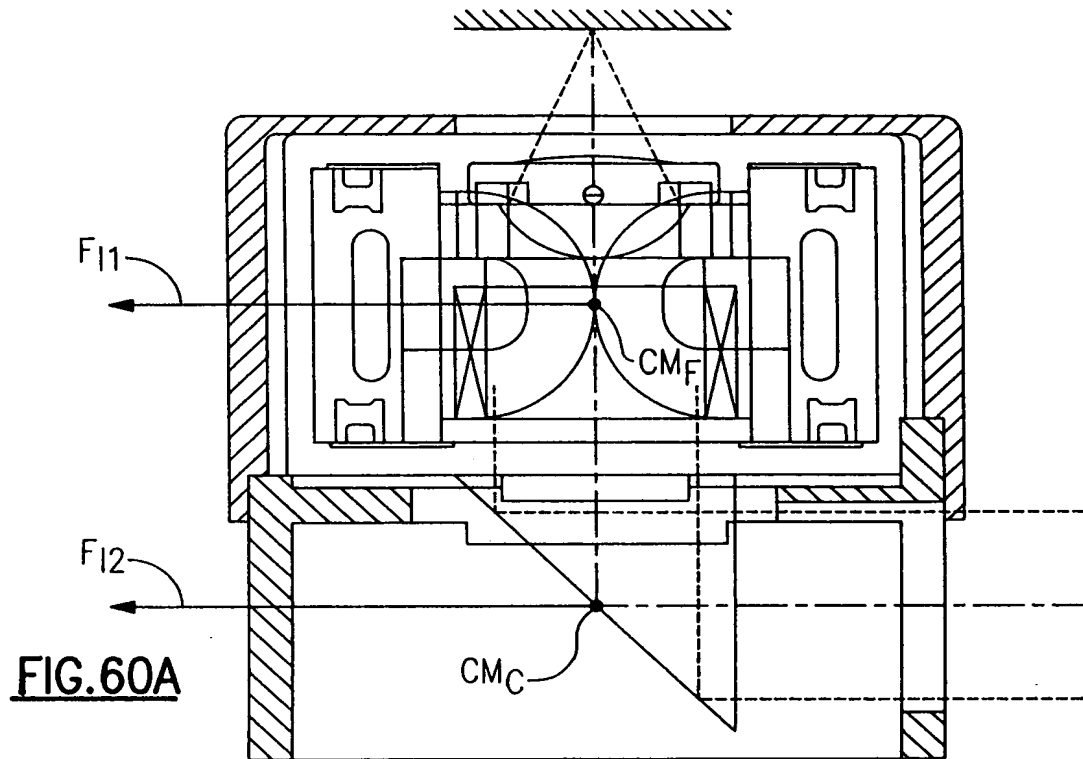


FIG.59B

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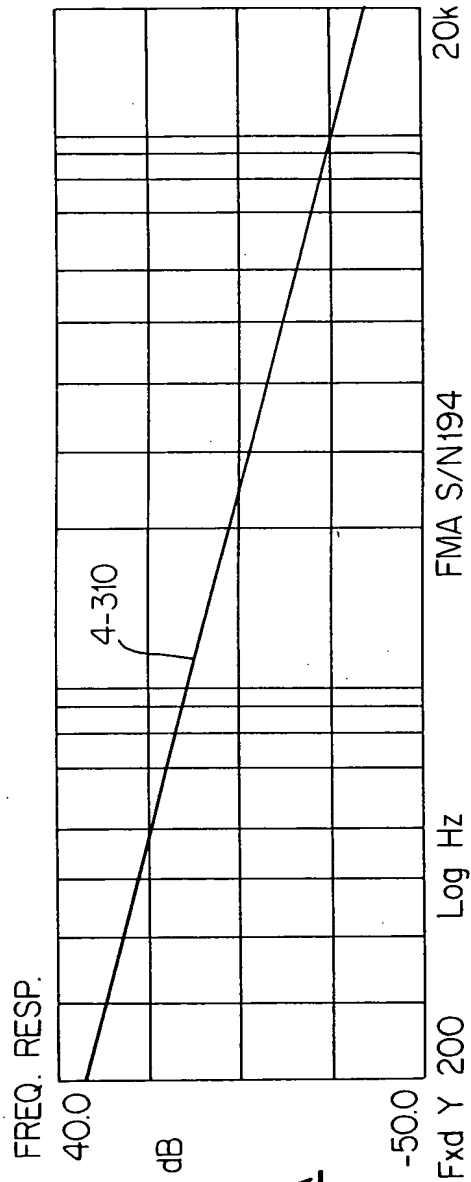


FIG. 61A

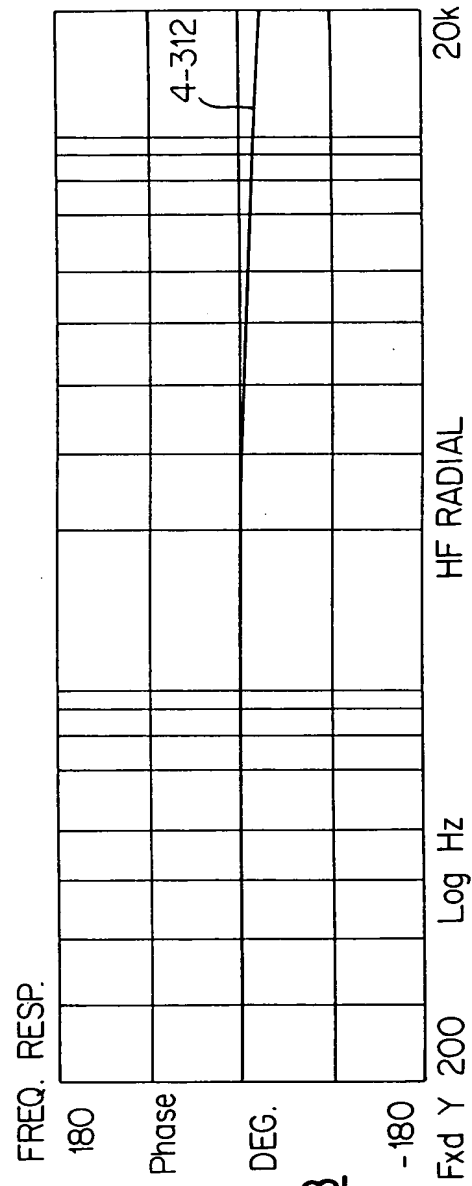


FIG. 61B

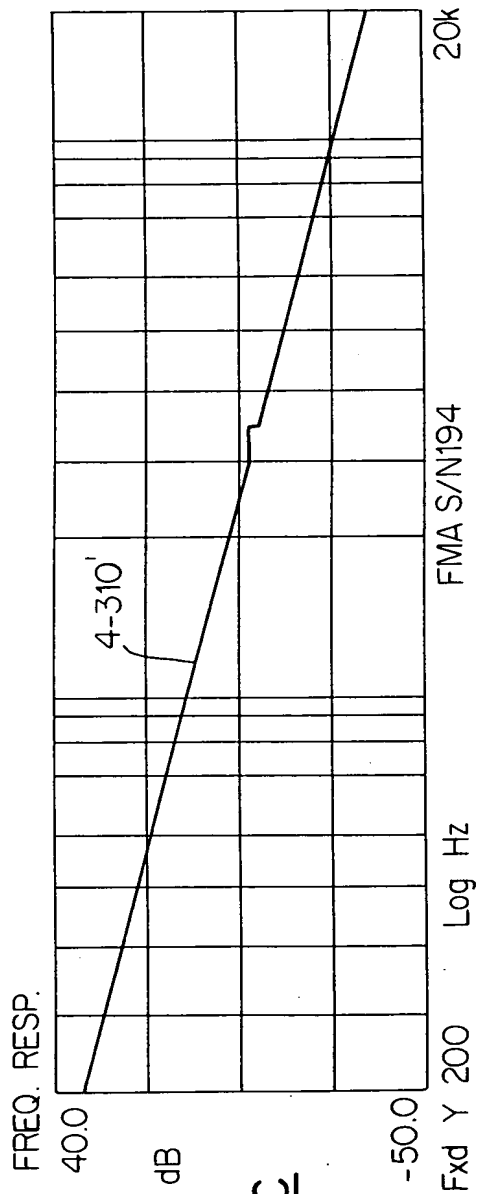


FIG. 61C

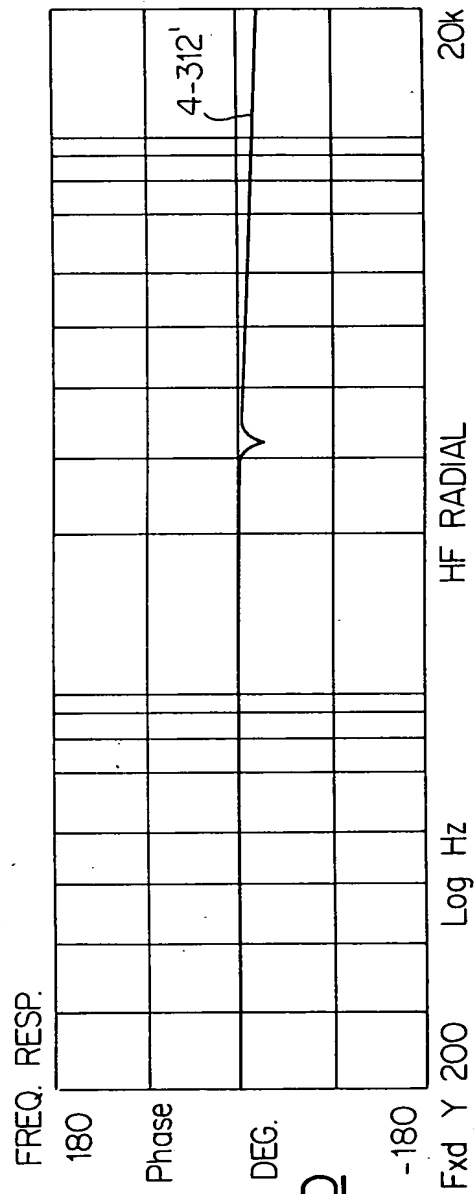


FIG. 61D

FIG.62A

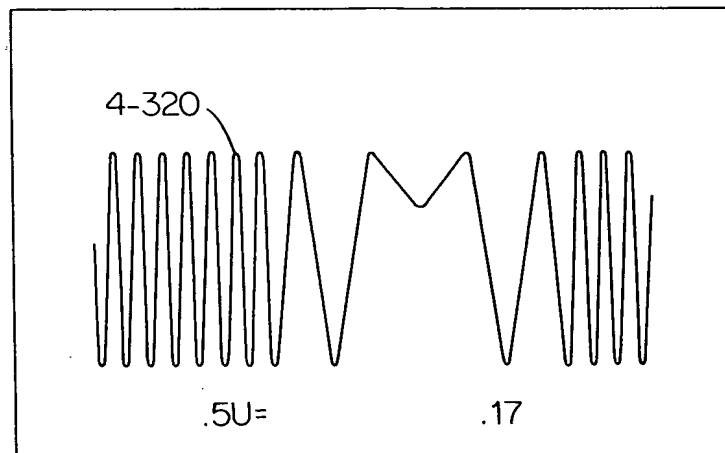


FIG.62B

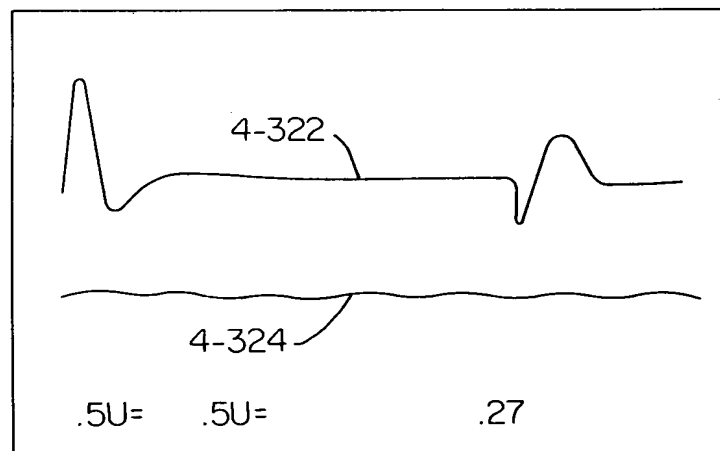
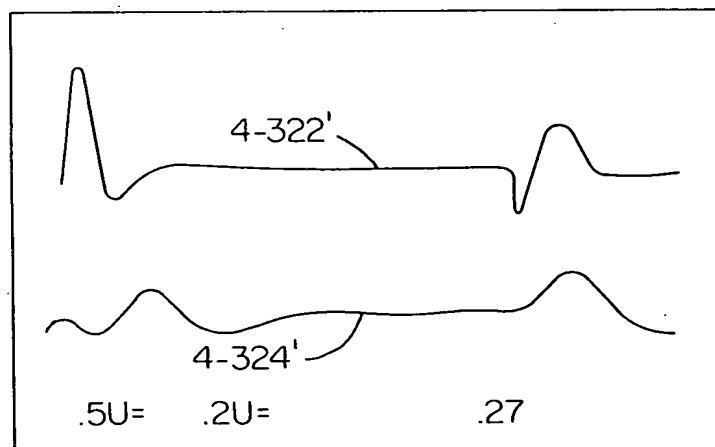
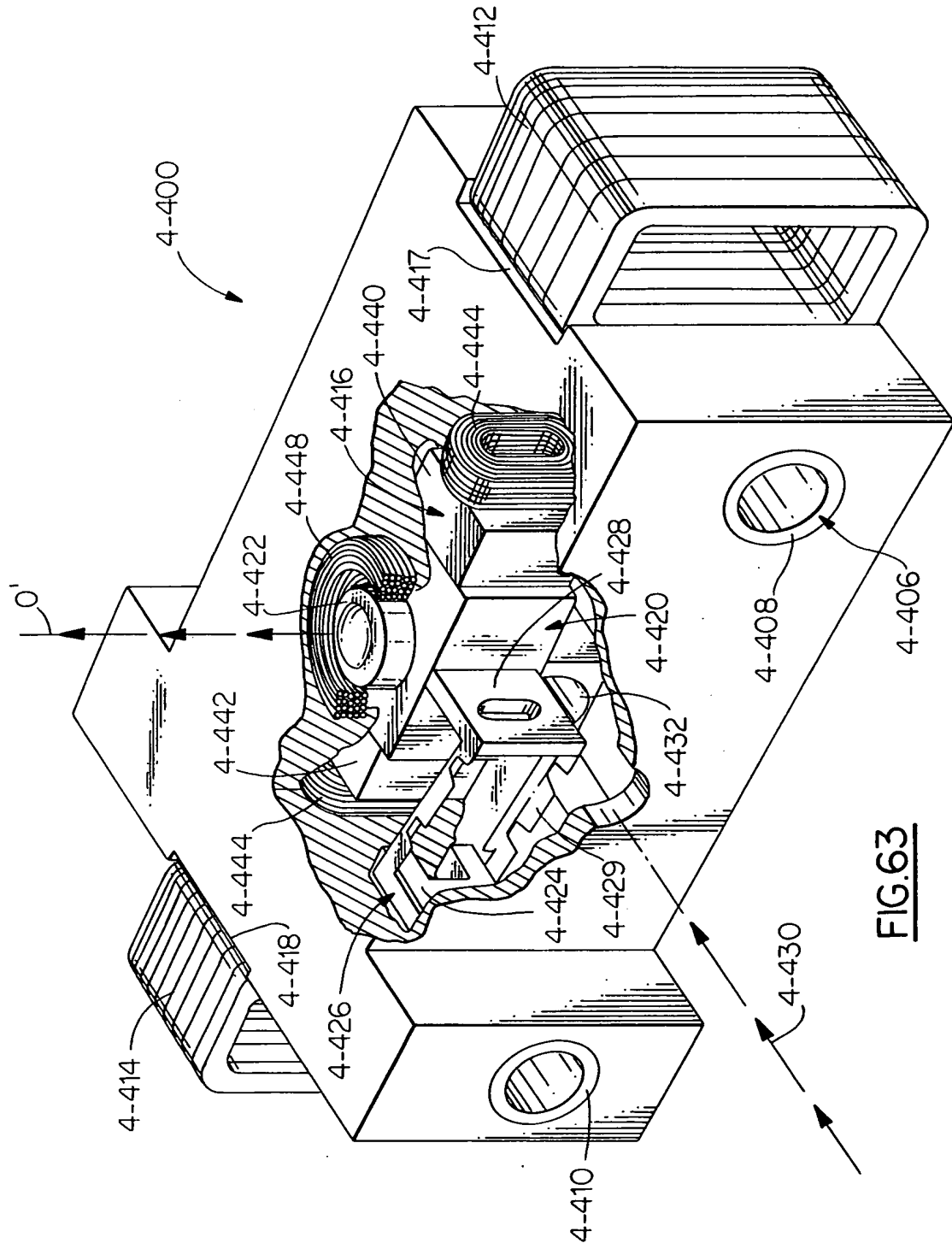
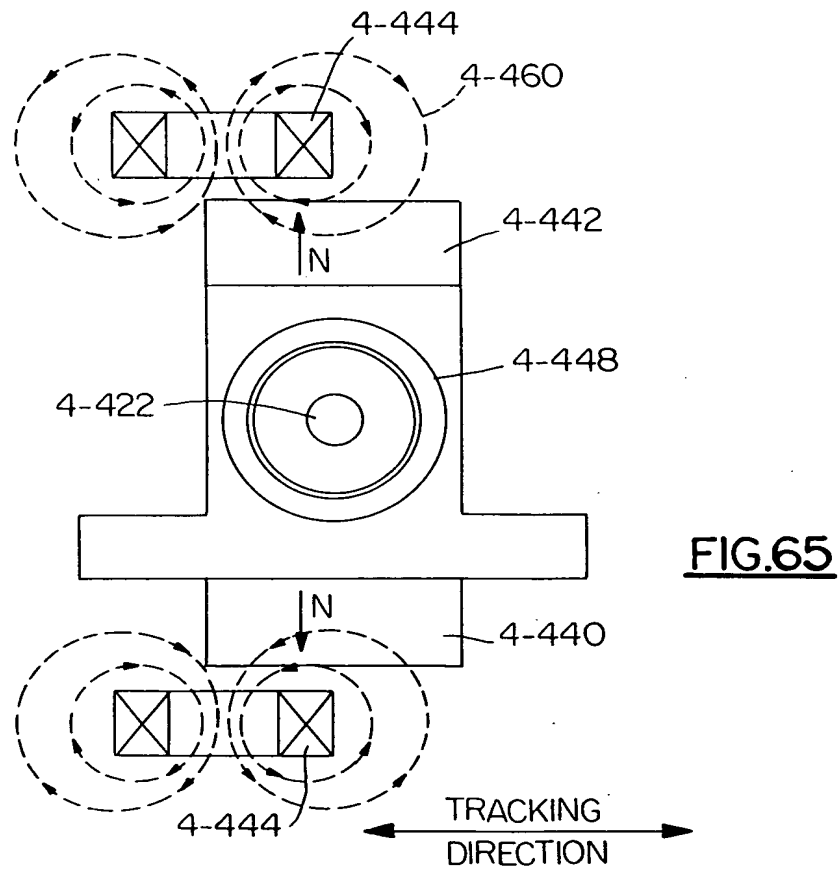
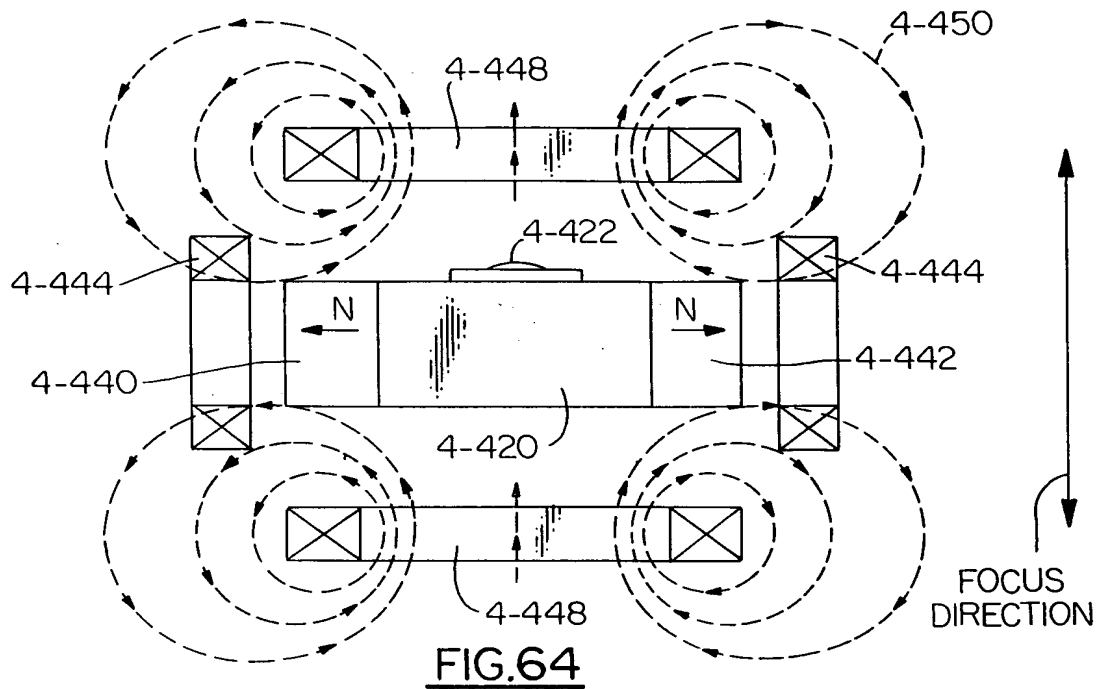


FIG.62C







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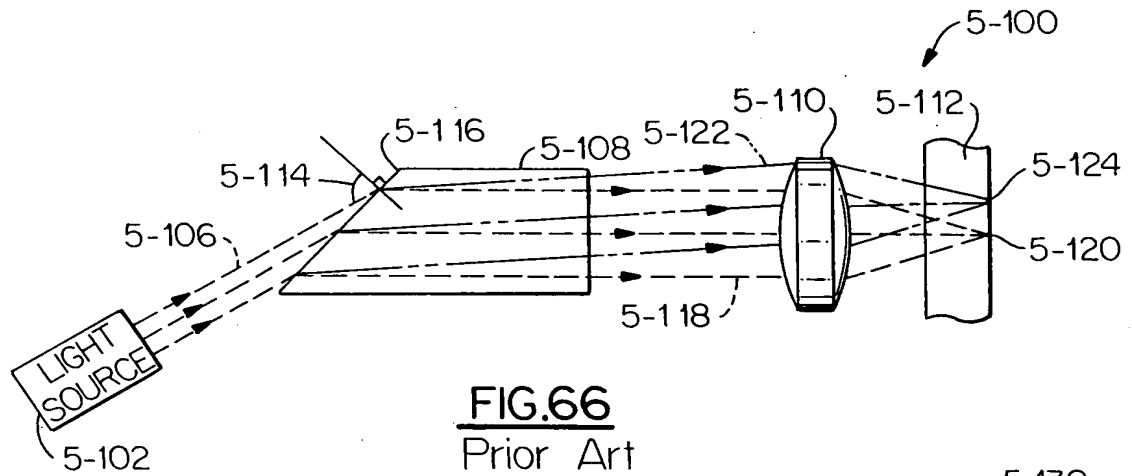


FIG. 66
Prior Art

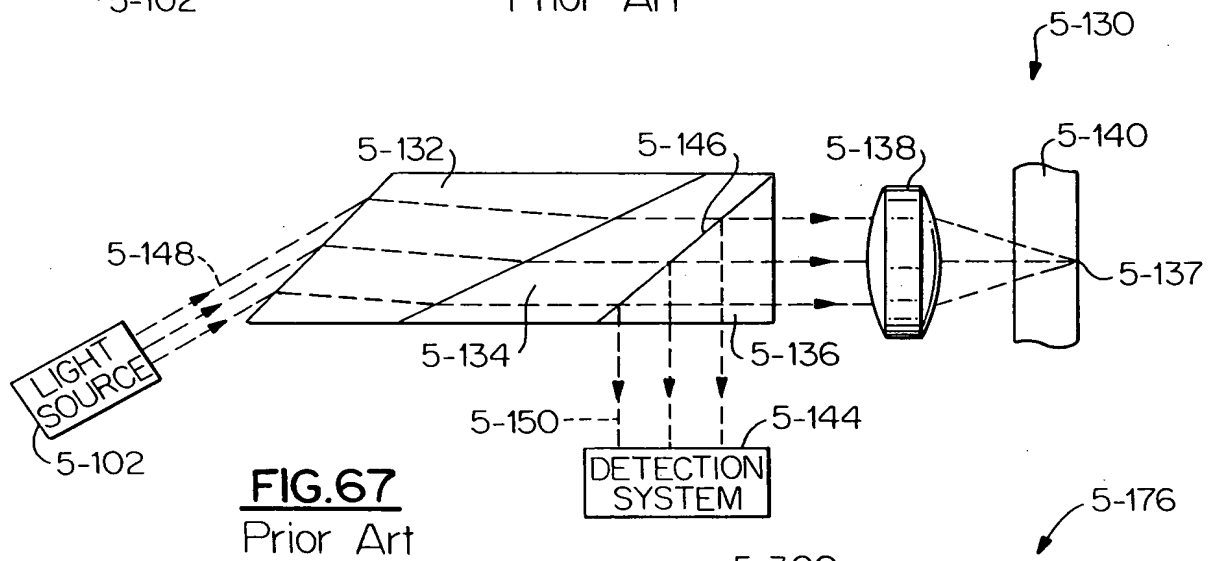


FIG. 67
Prior Art

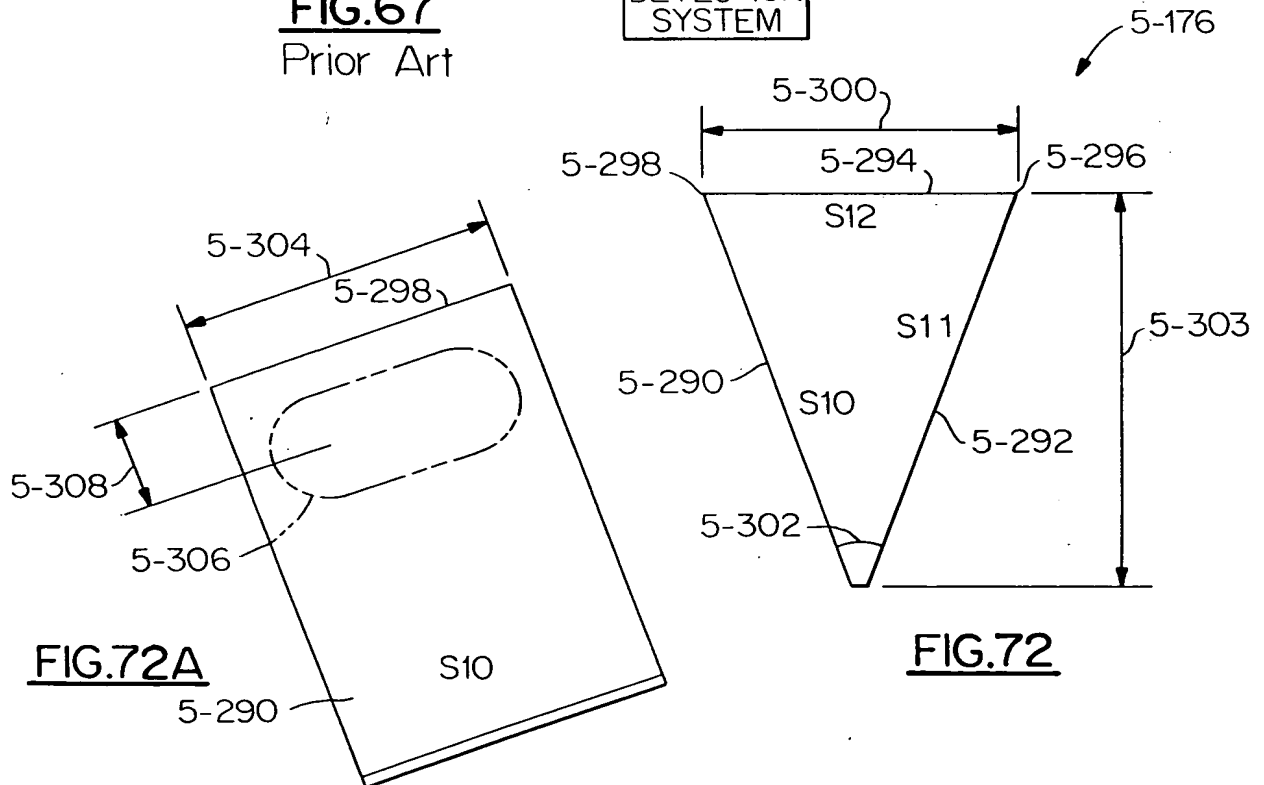
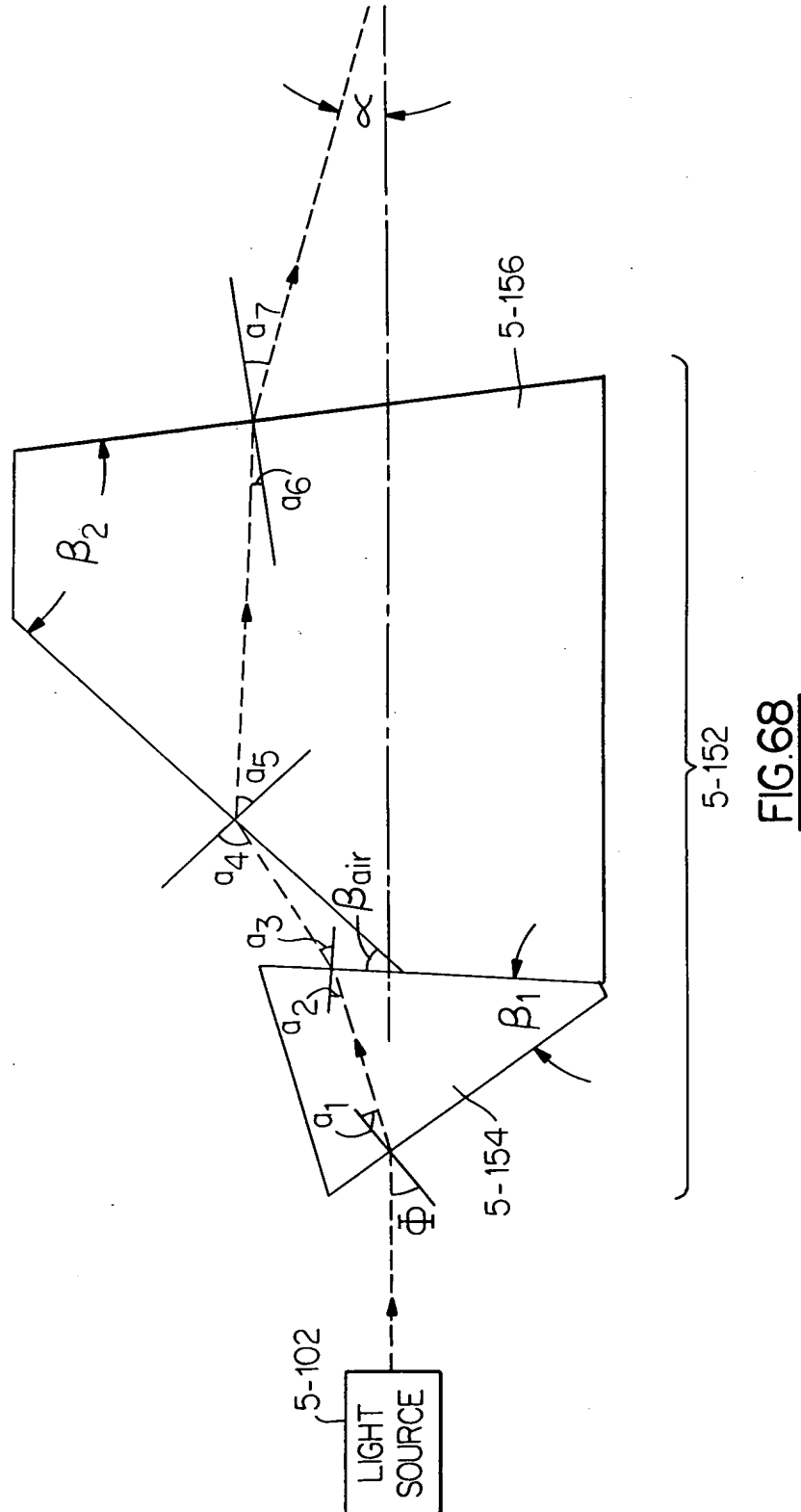


FIG. 72A

FIG. 72





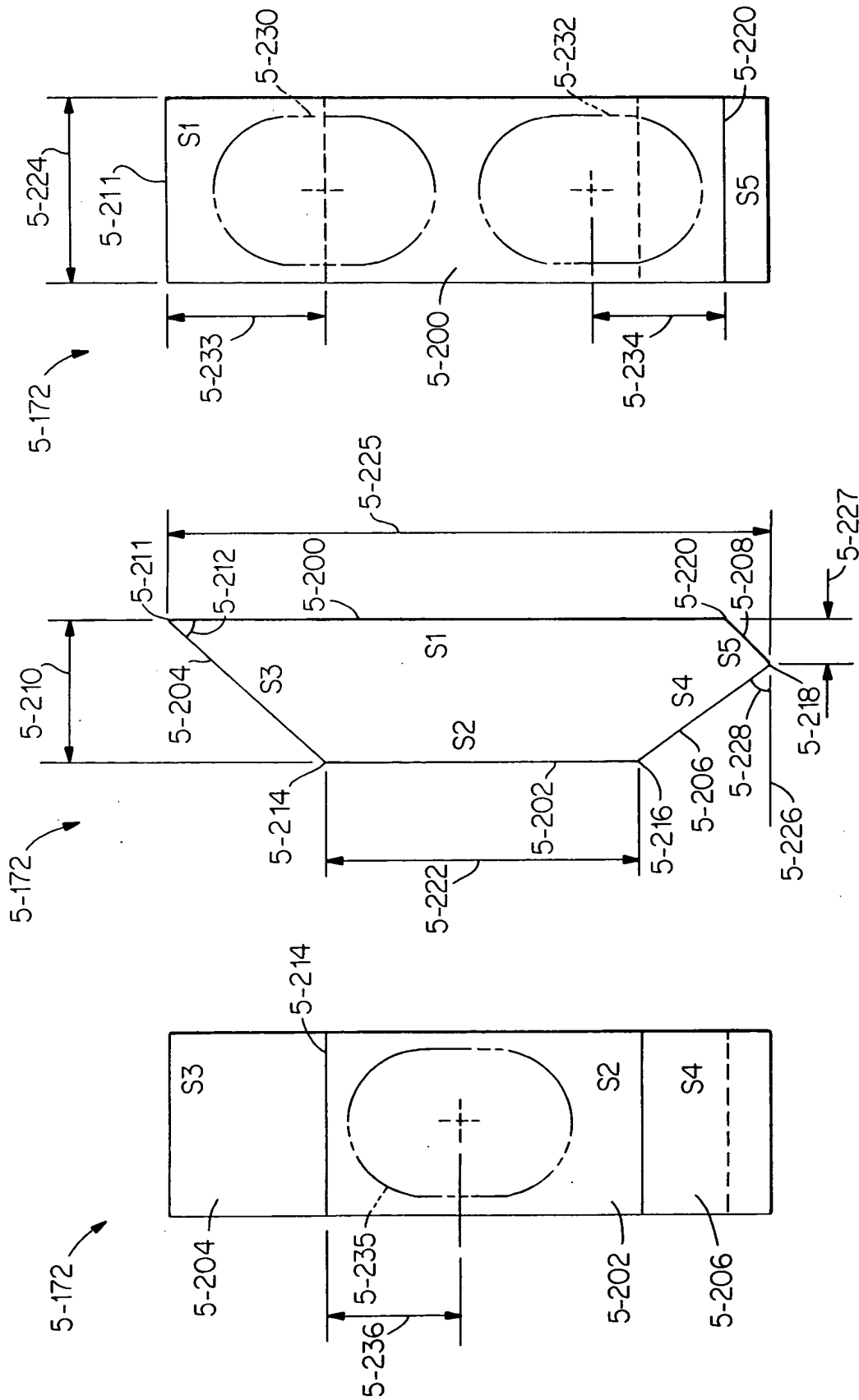


FIG. 70A

FIG. 70B

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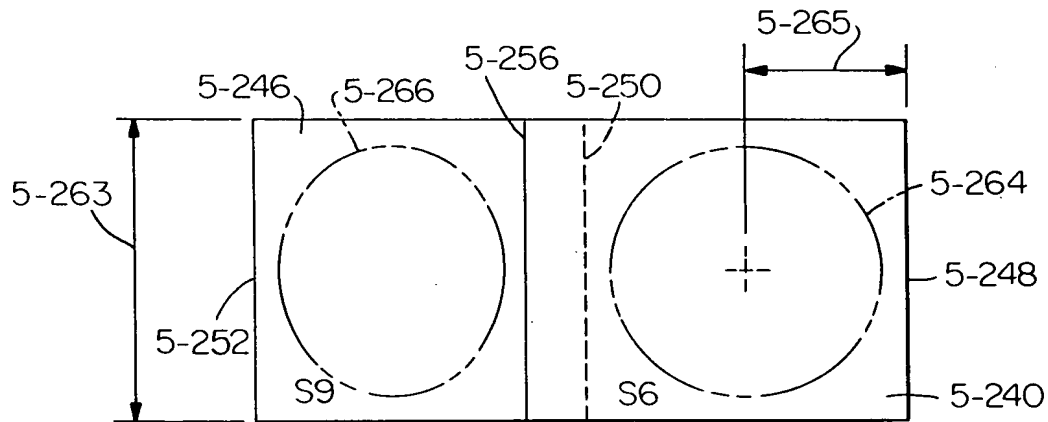


FIG. 71A

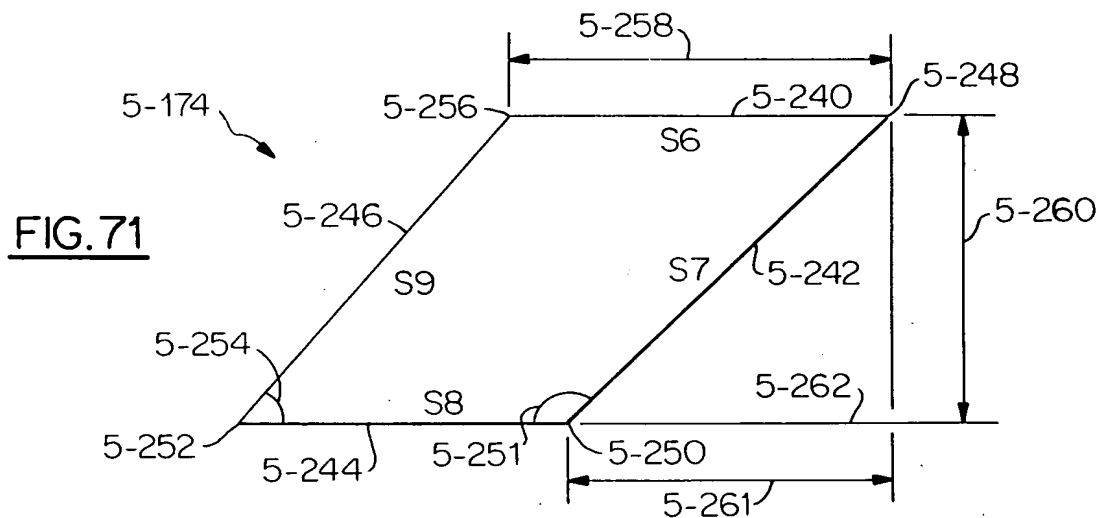


FIG. 71

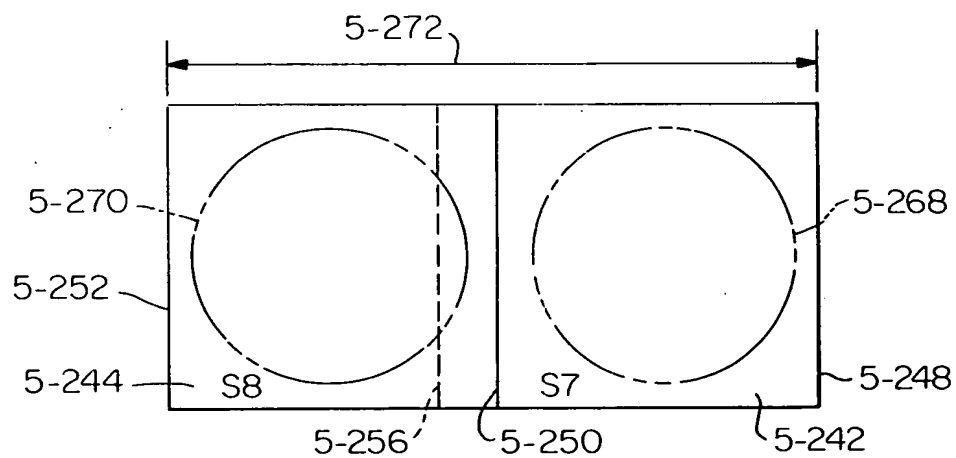


FIG. 71B

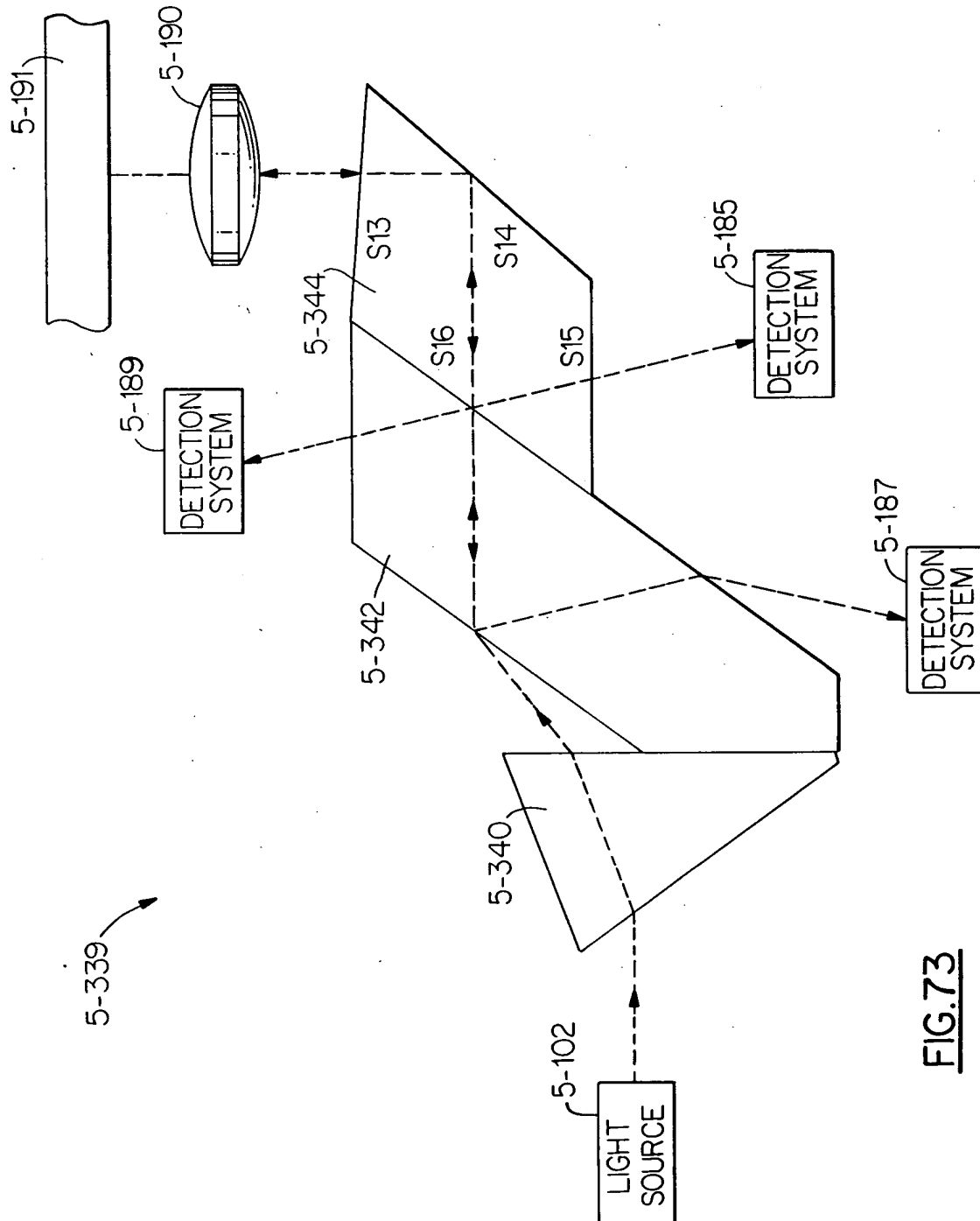


FIG. 73

FIG.74

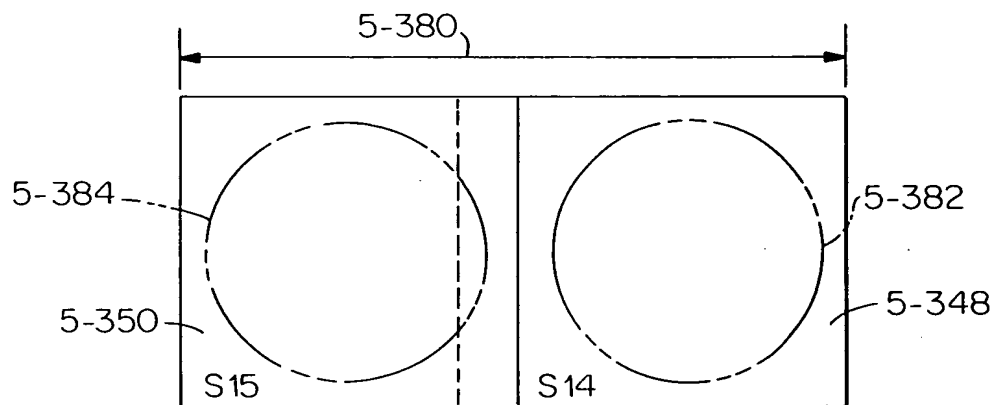


FIG.74B

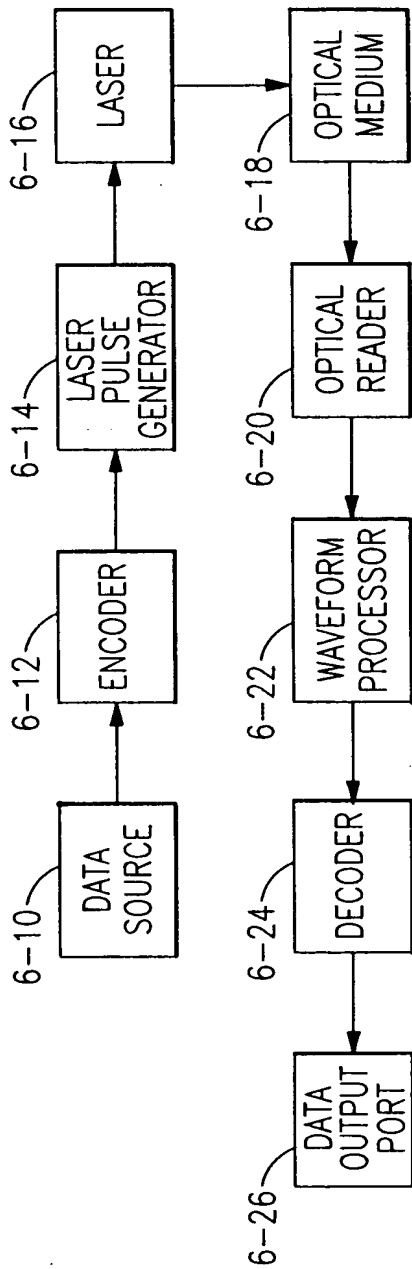


FIG. 75

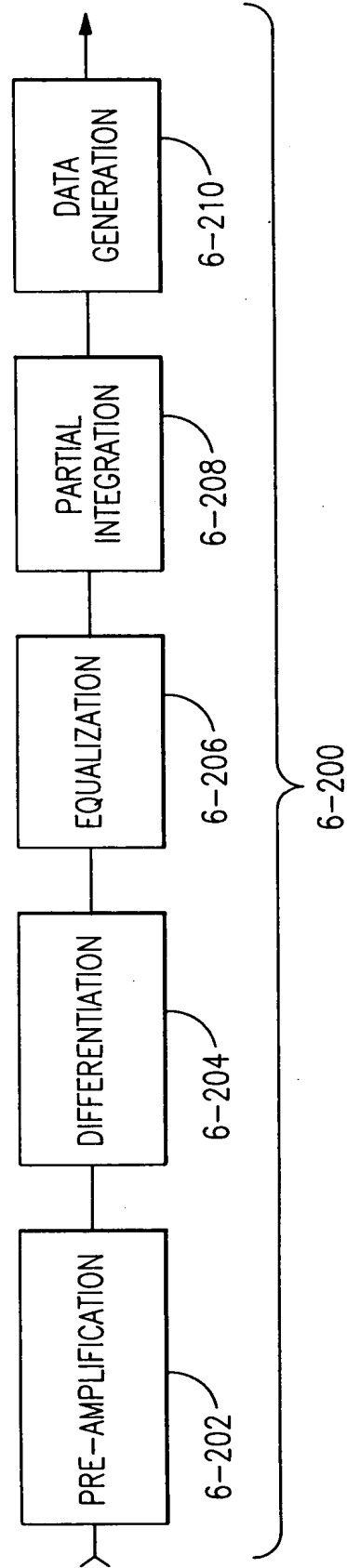


FIG. 78

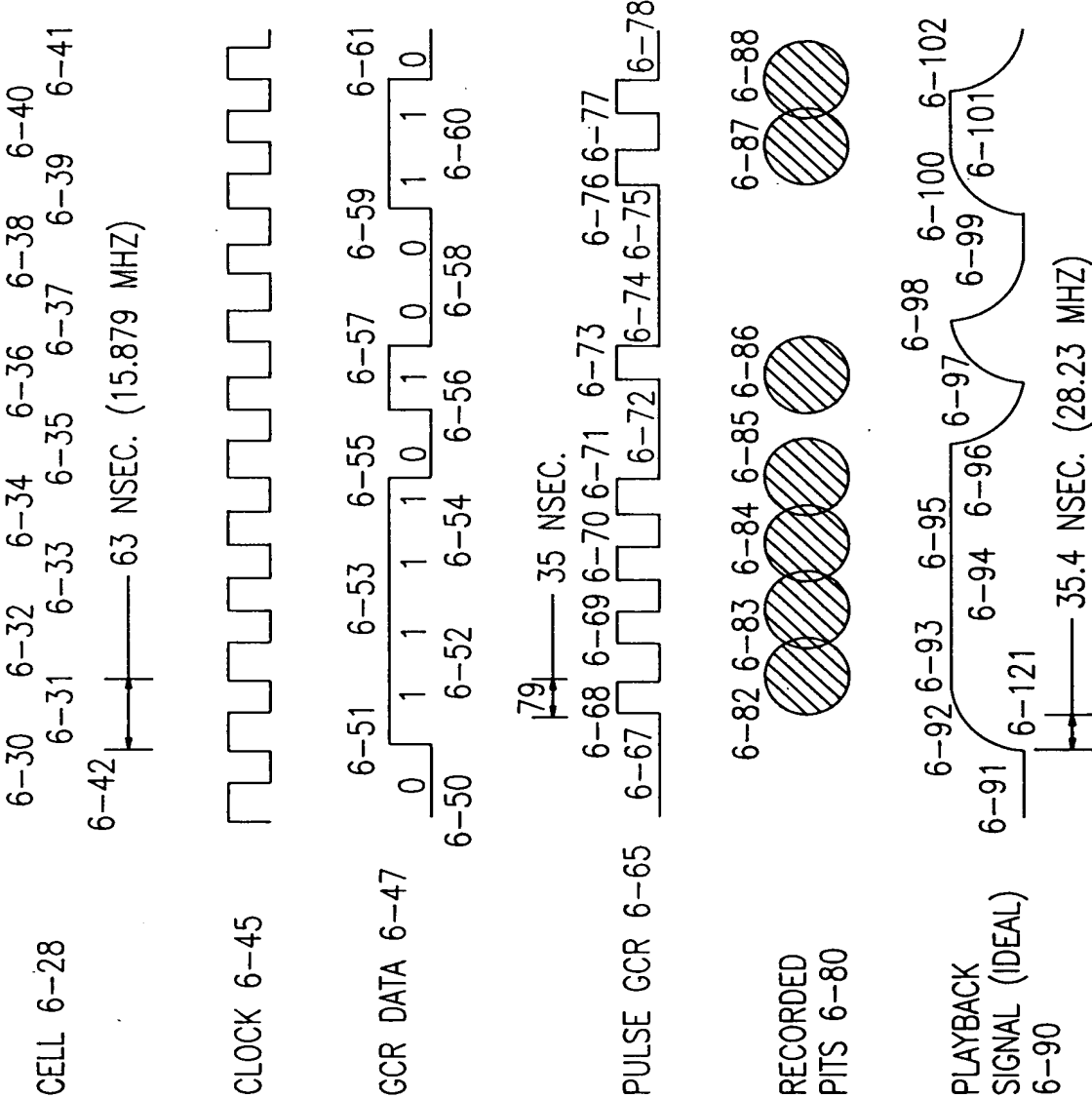


FIG.76A

FIG.76A
FIG.76B
FIG.76

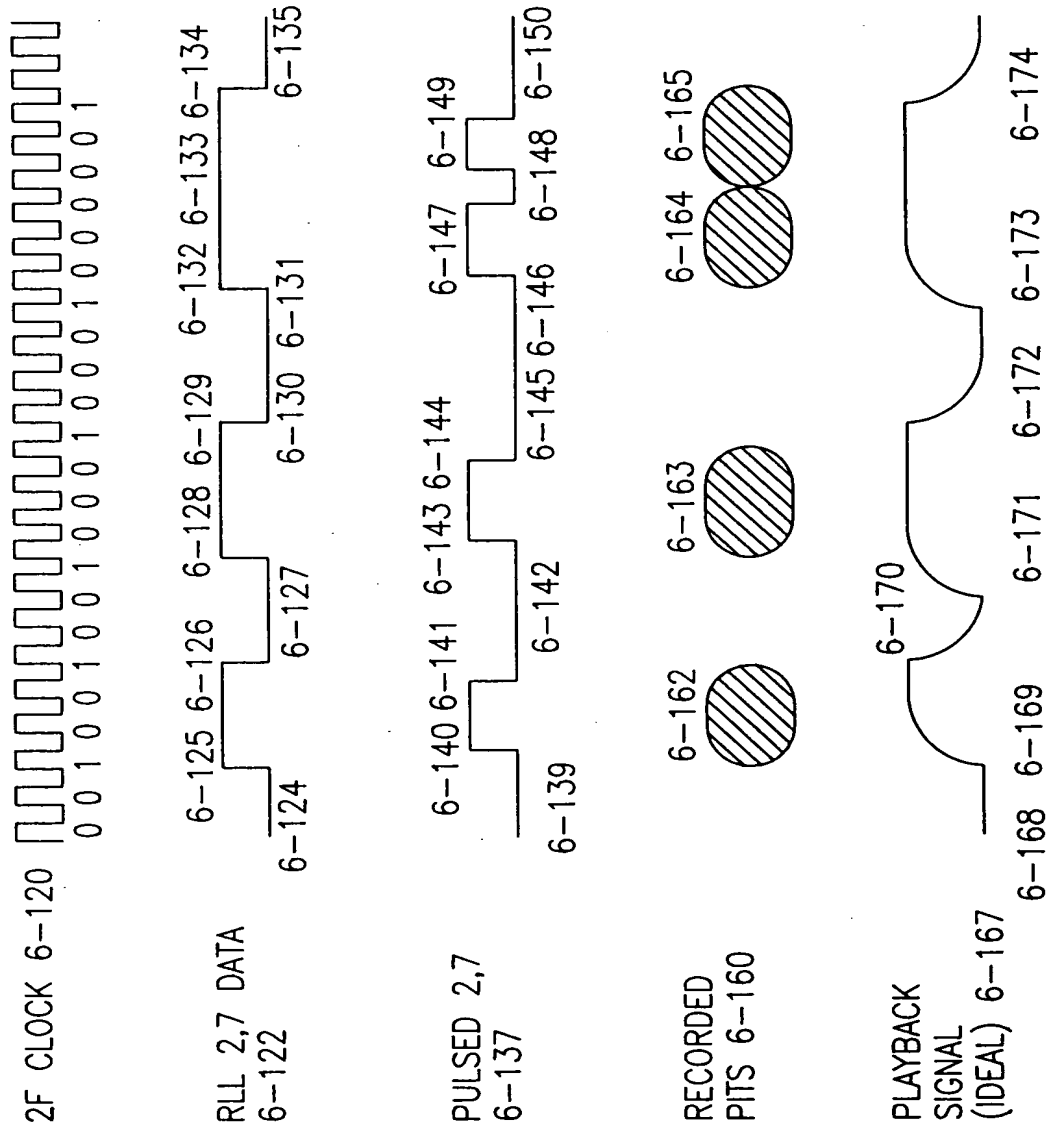


FIG. 76B

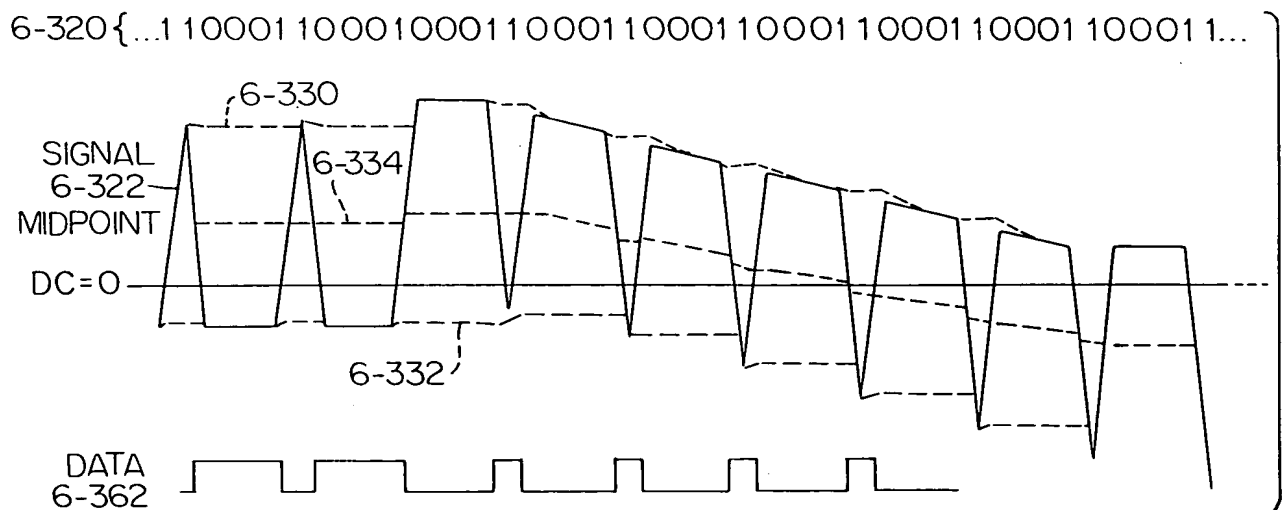
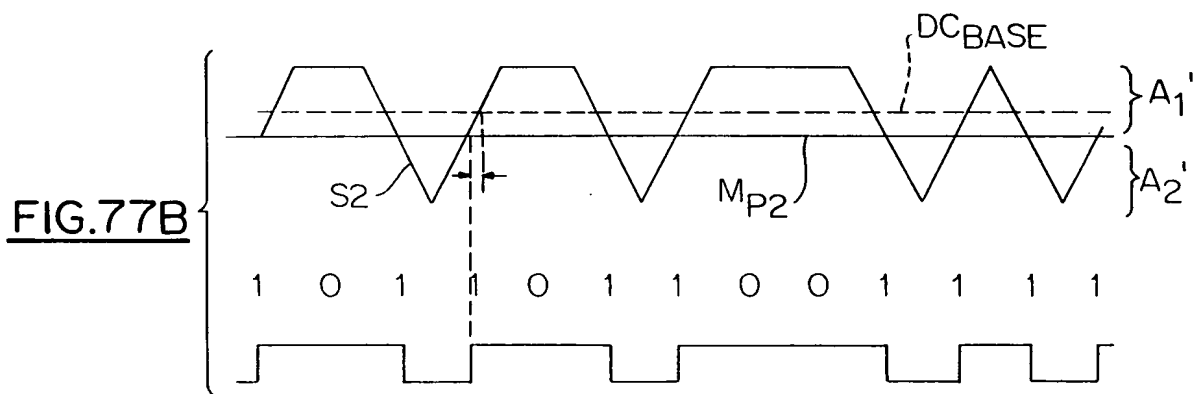
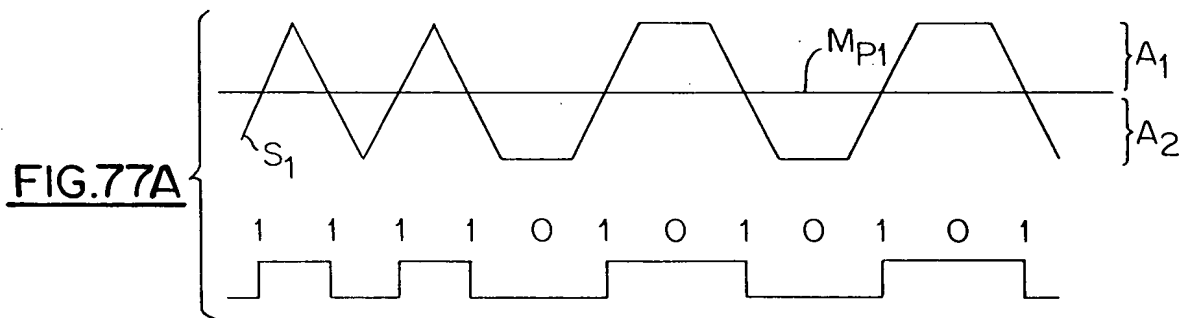


FIG.83



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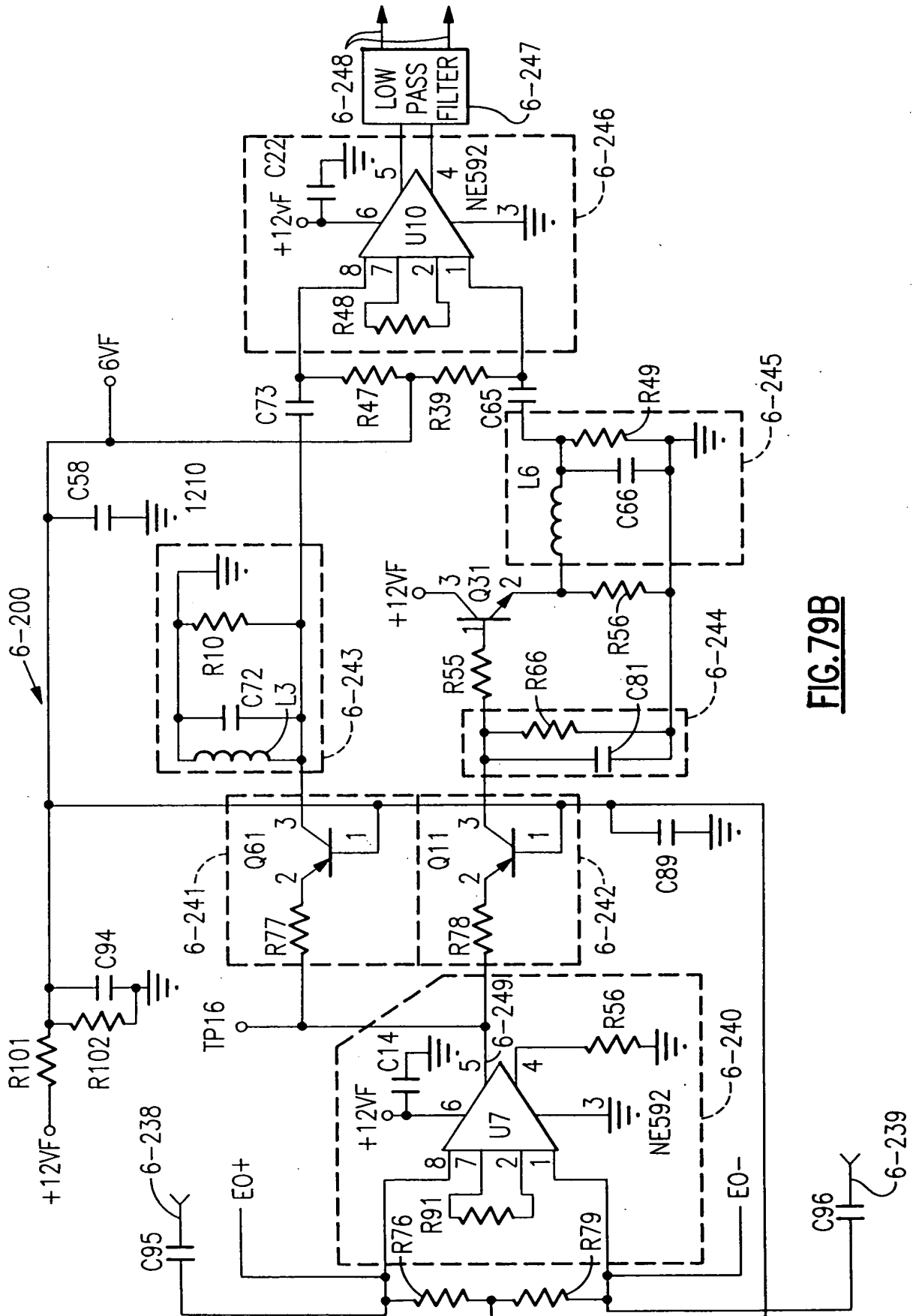


FIG. 79B

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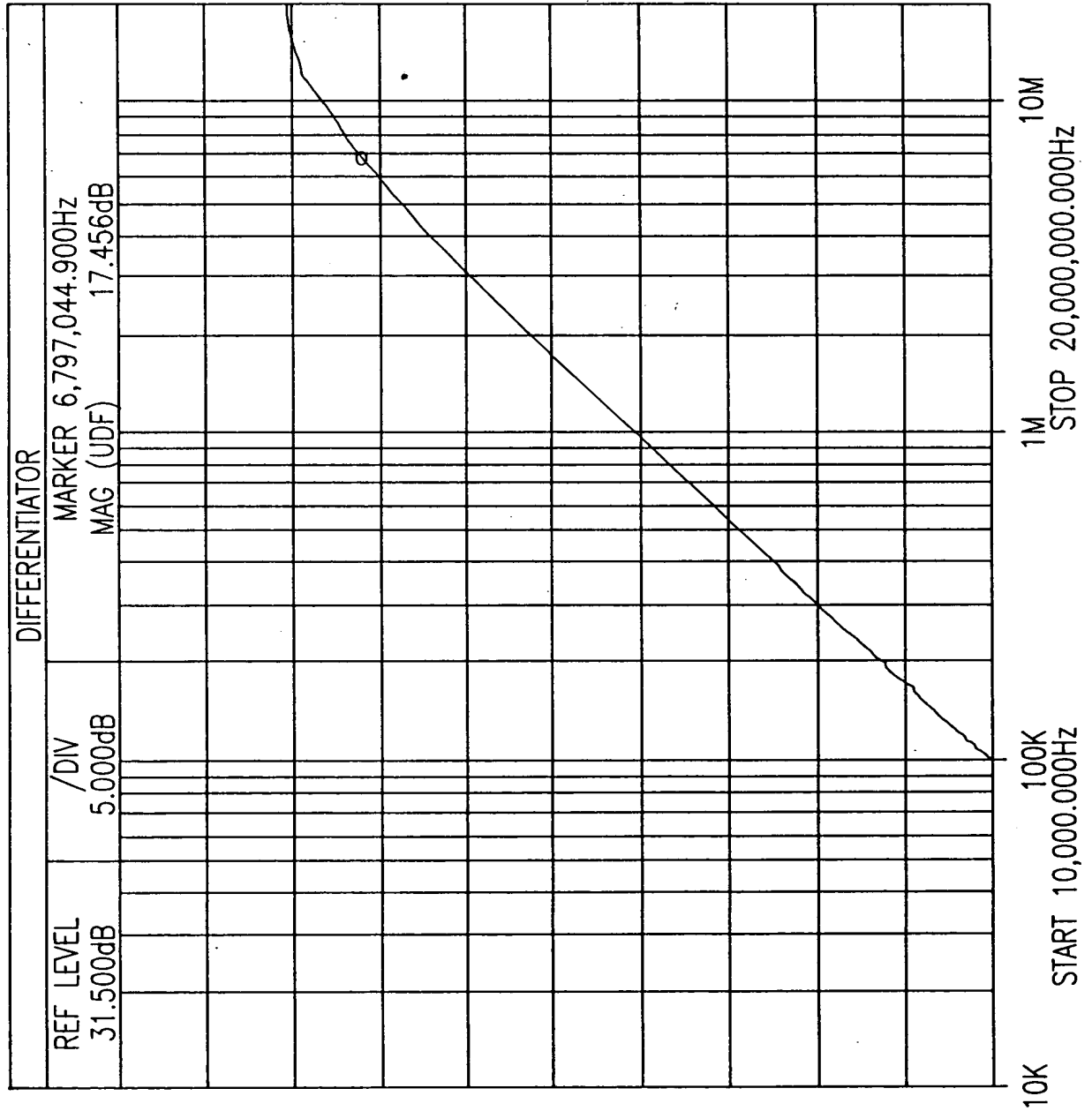


FIG.80A

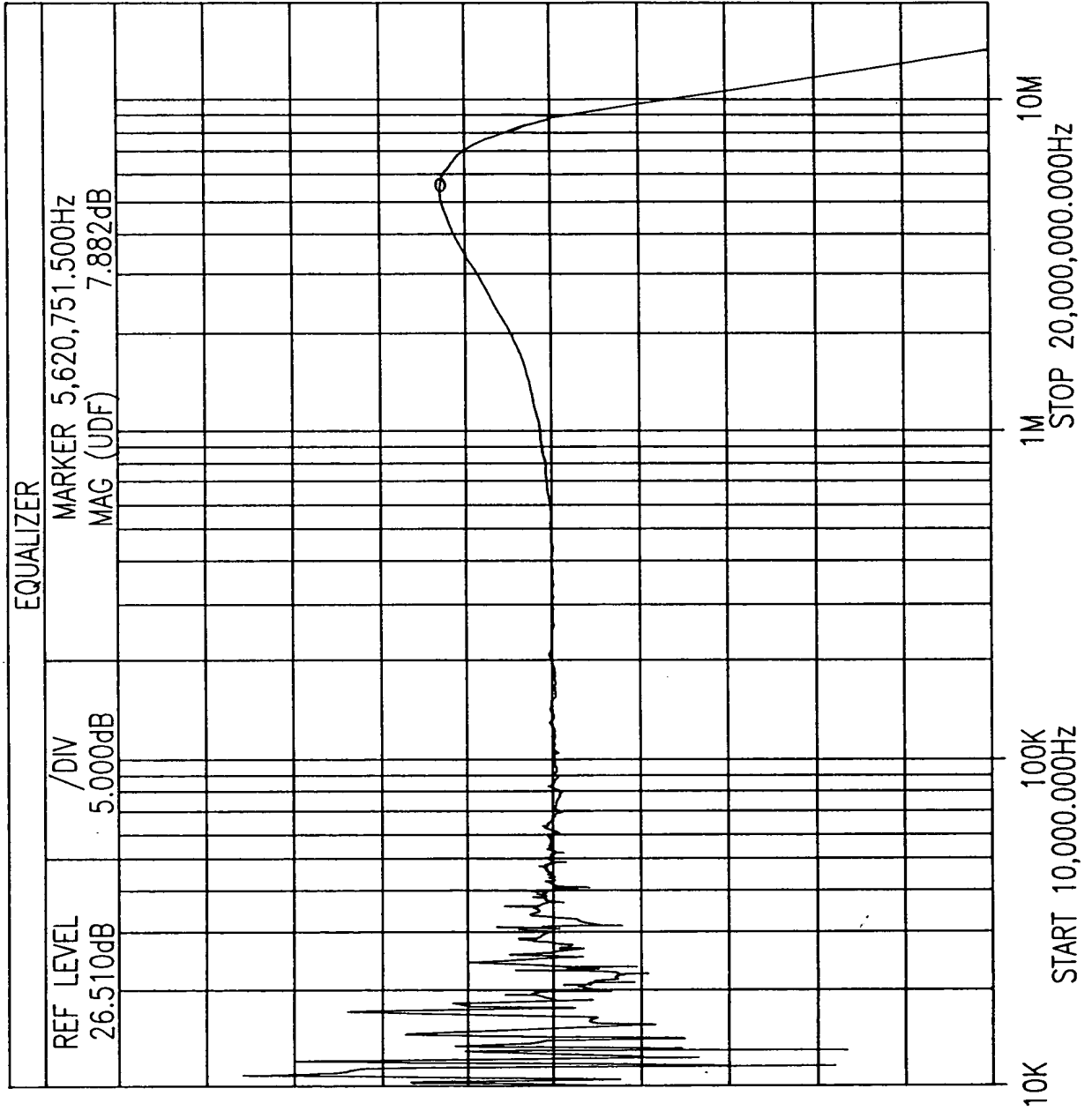


FIG.80B

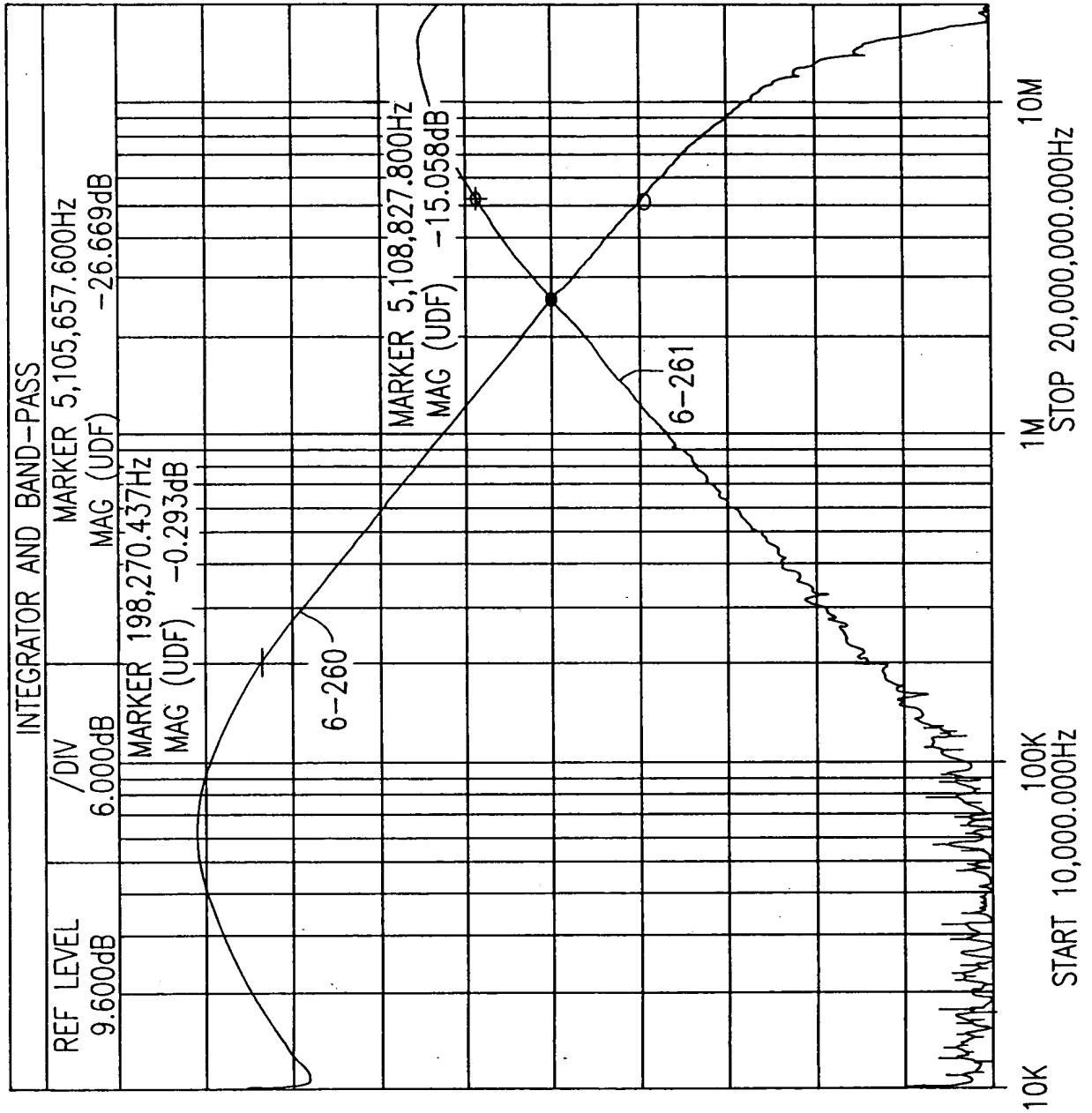


FIG.80C

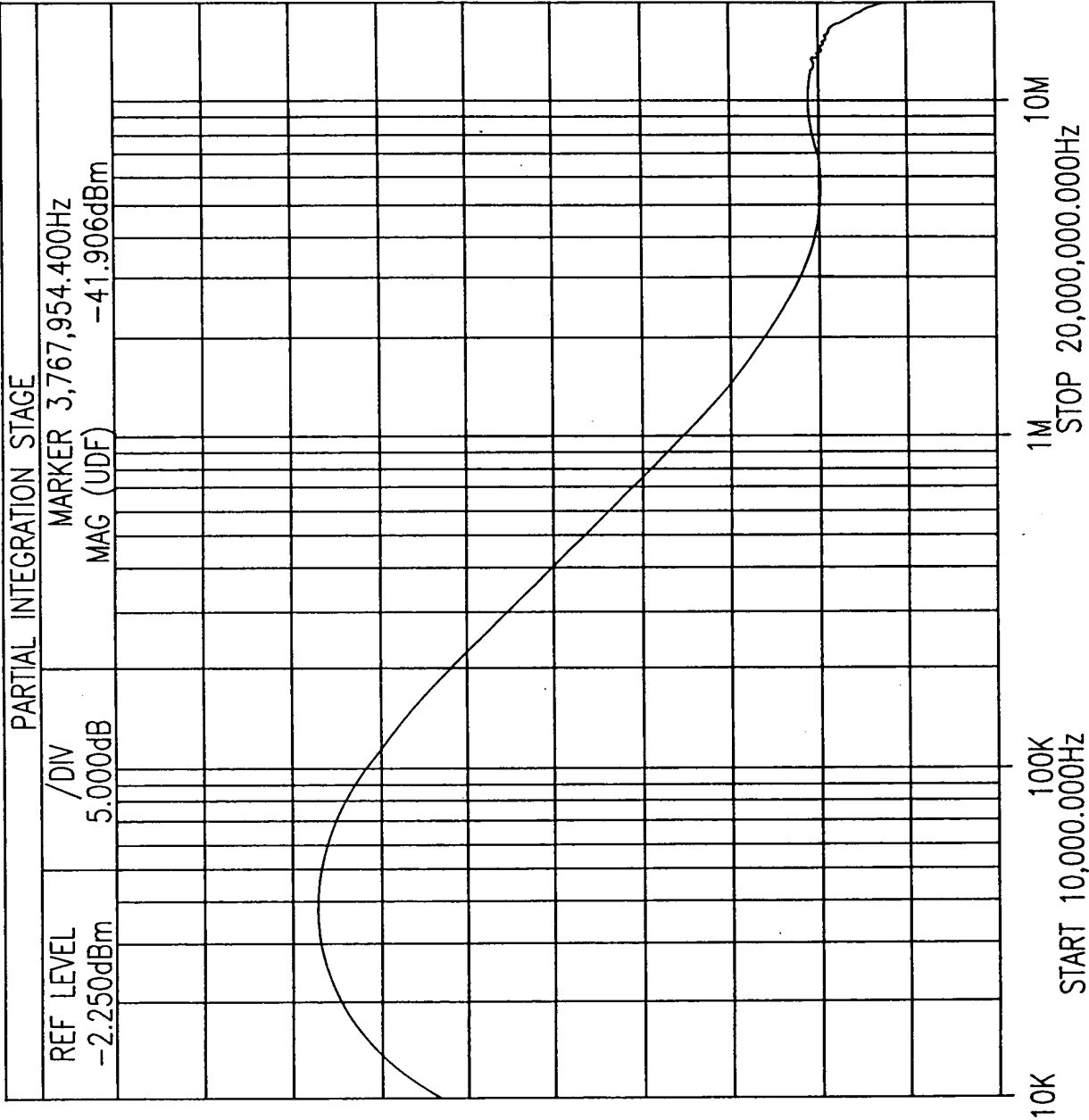


FIG.80D

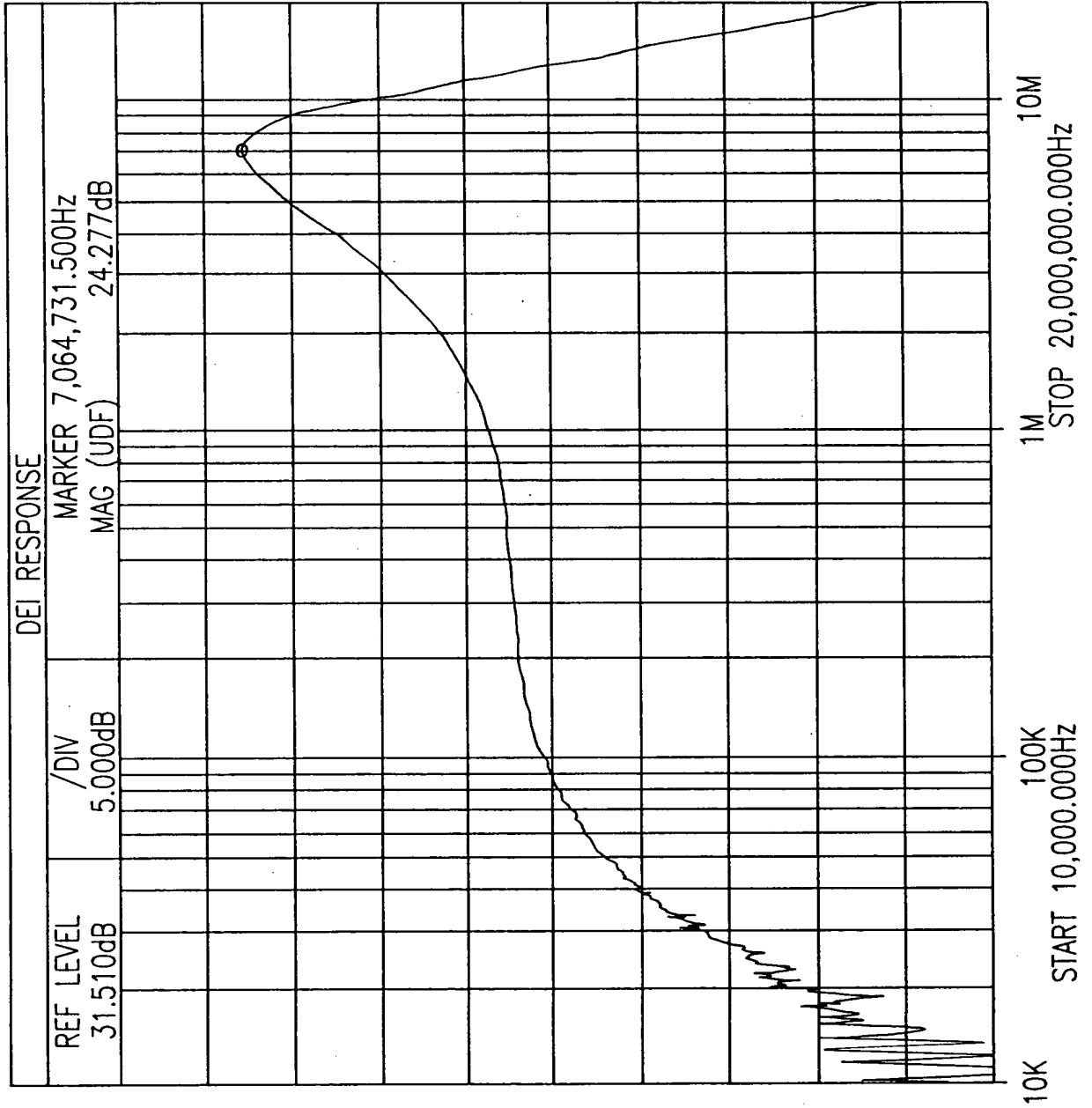
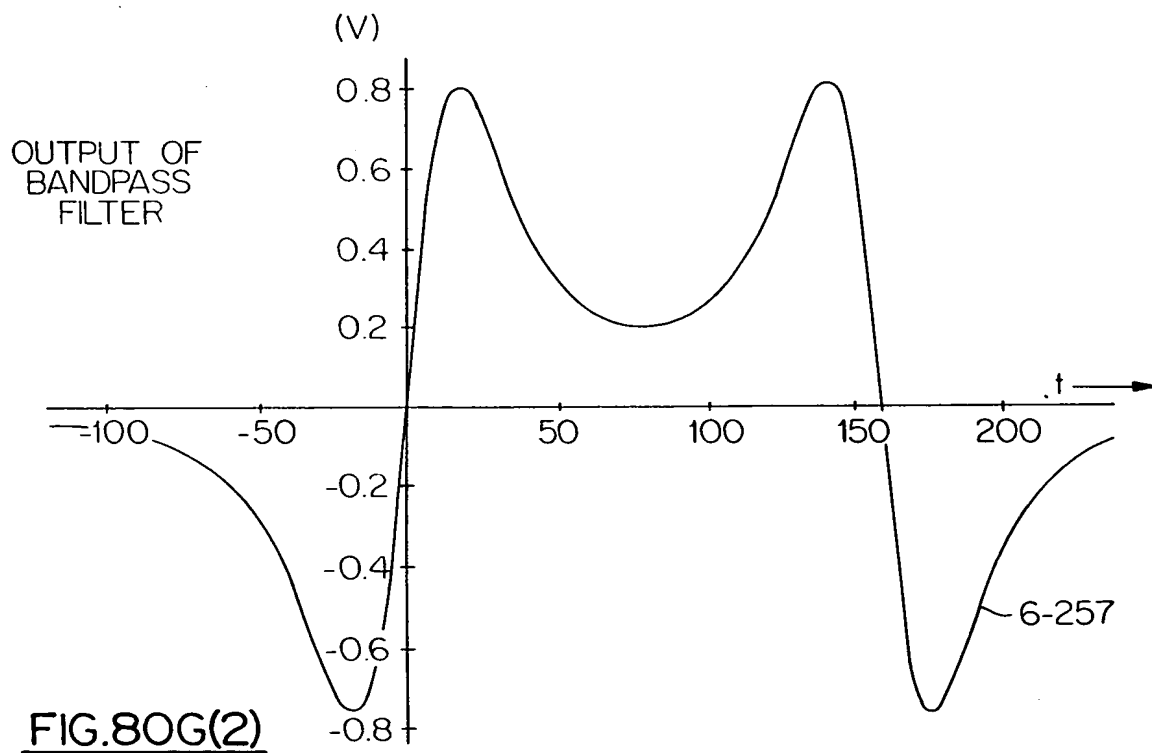
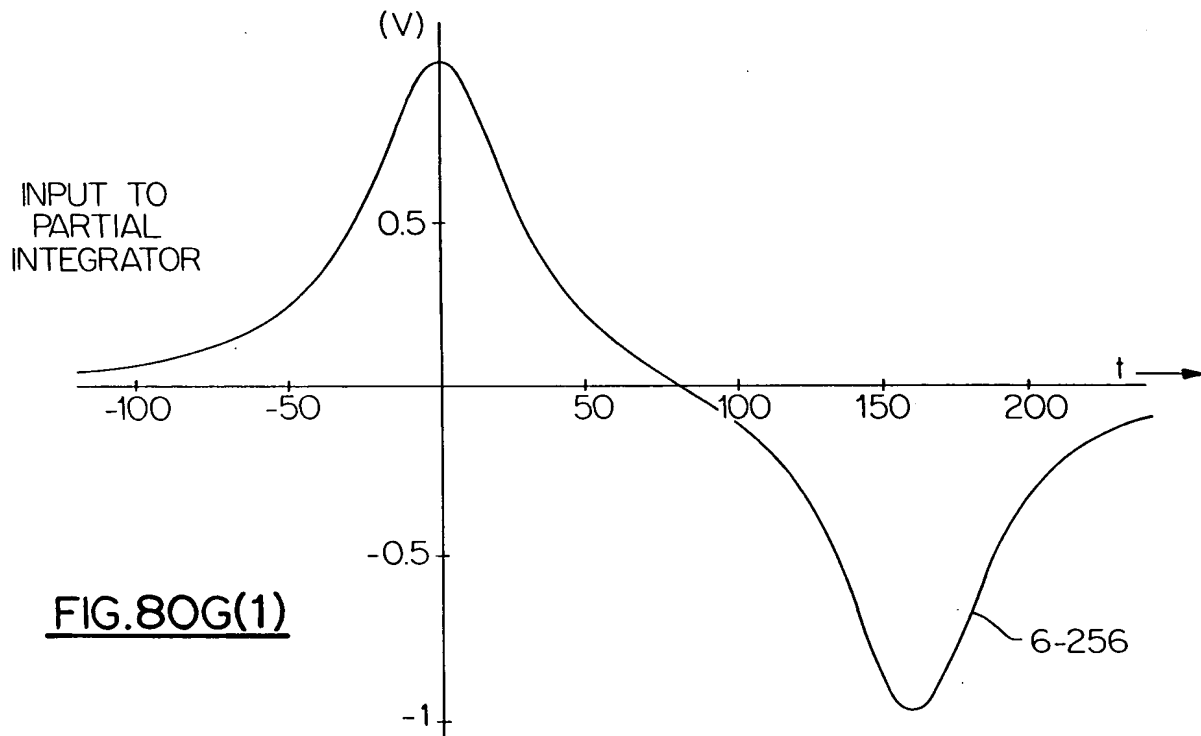


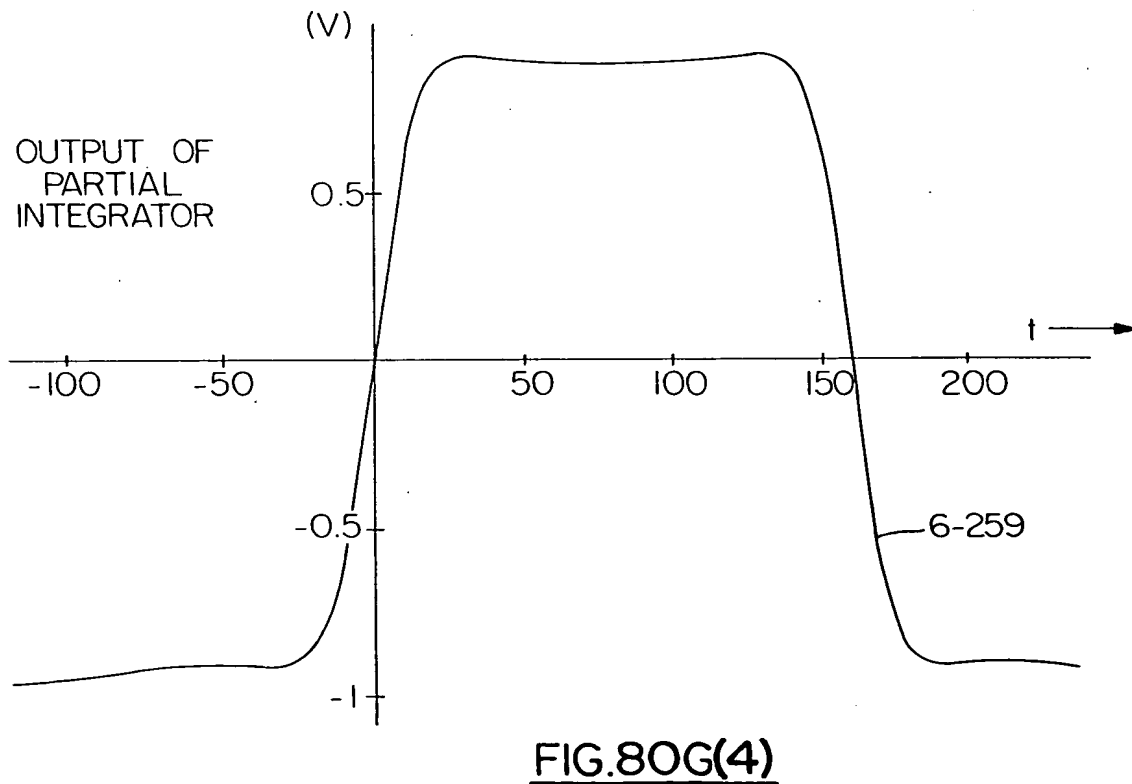
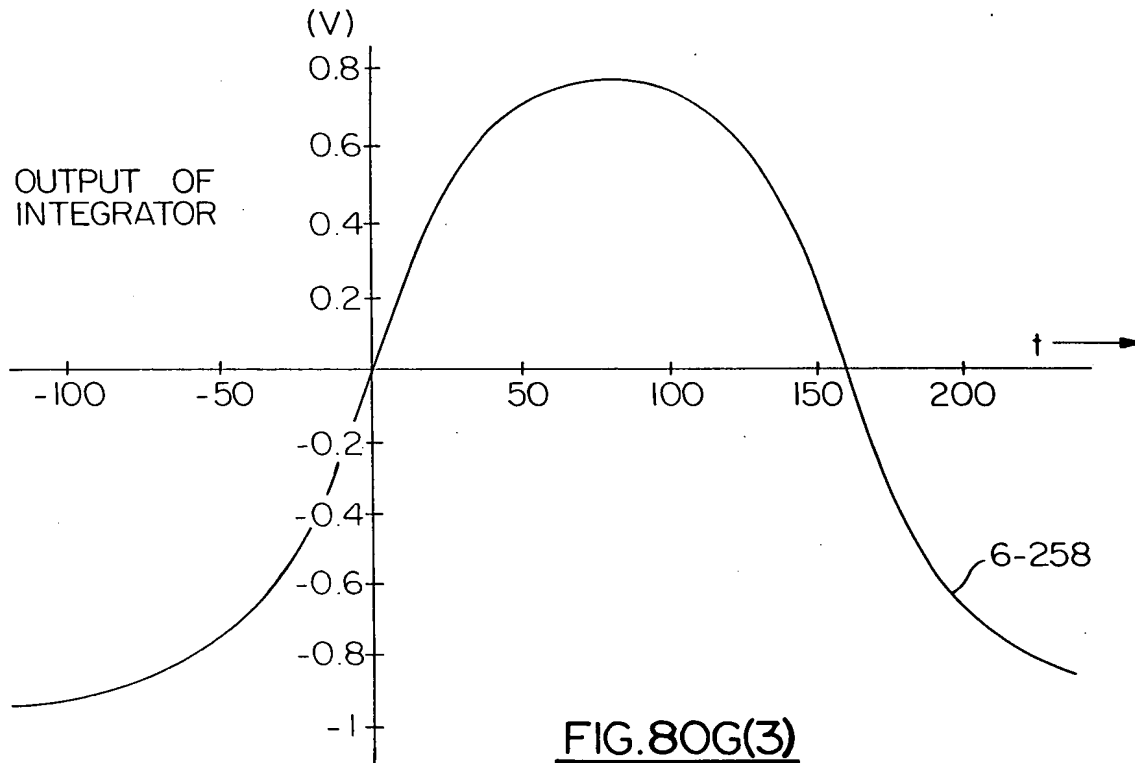
FIG.80E

STOP 10,000,000.000Hz
DELAY APER 720.0kHz

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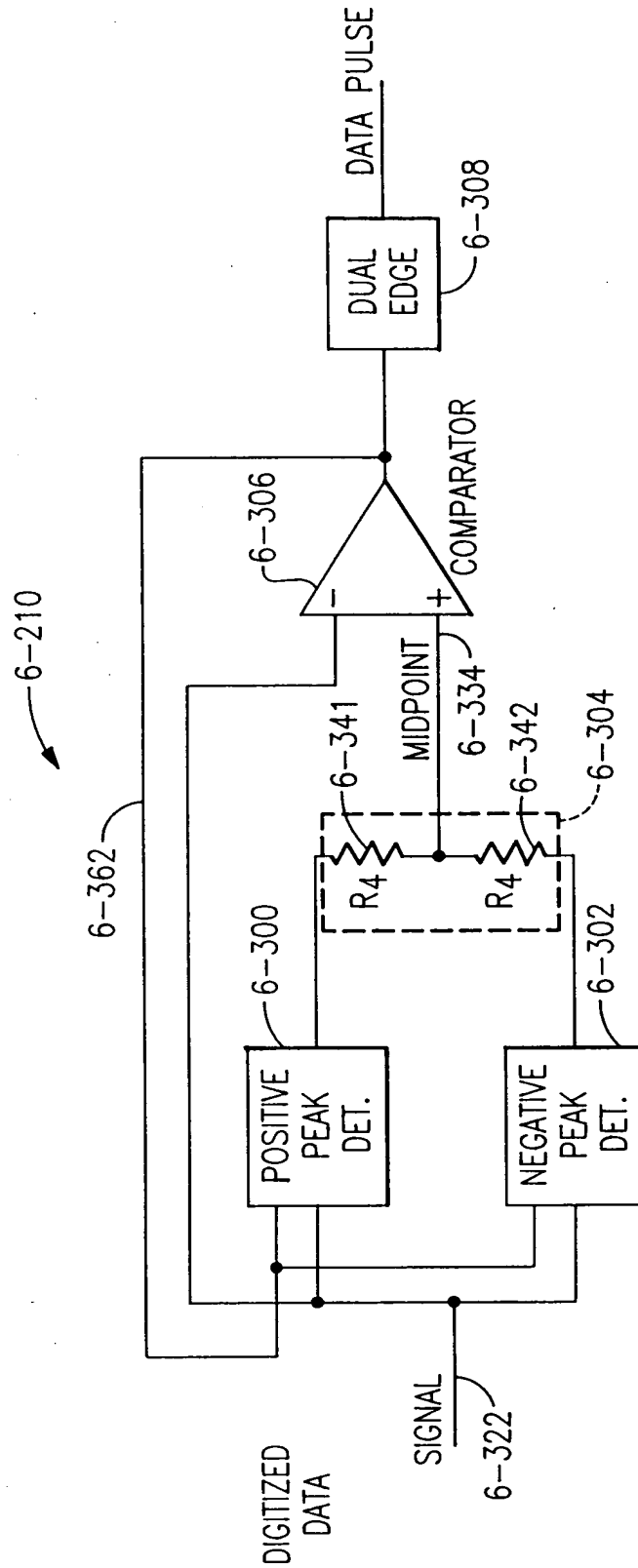
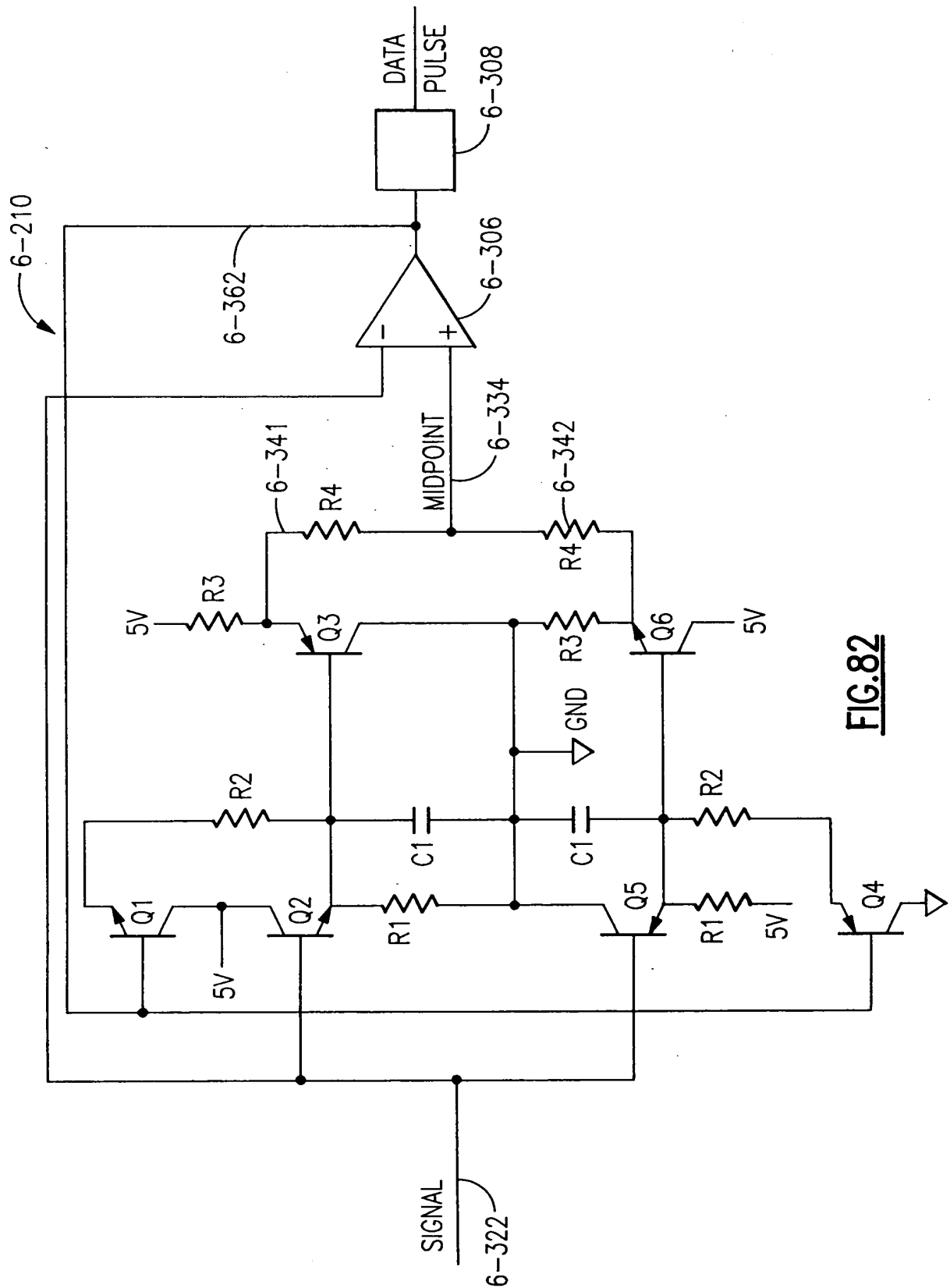


FIG.81



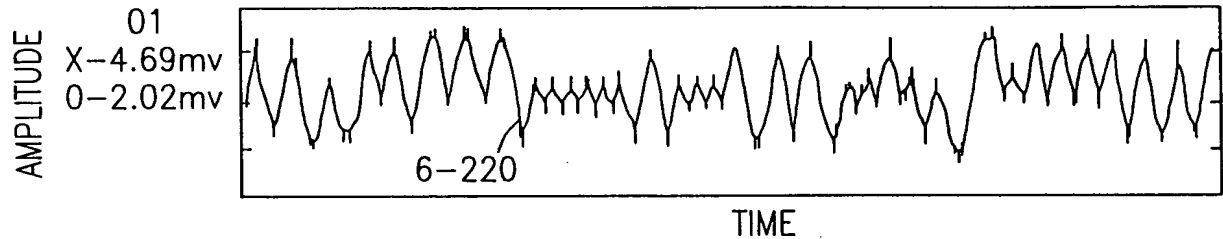


FIG.84A

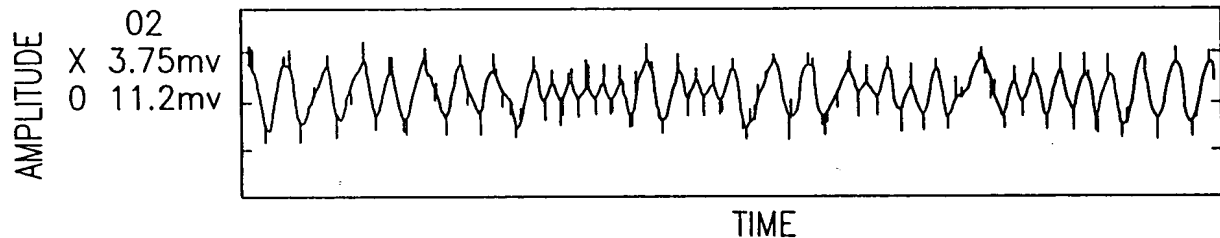


FIG.84B

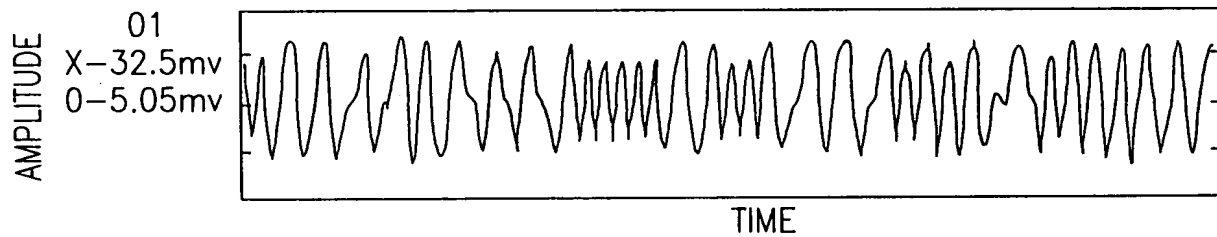


FIG.84C

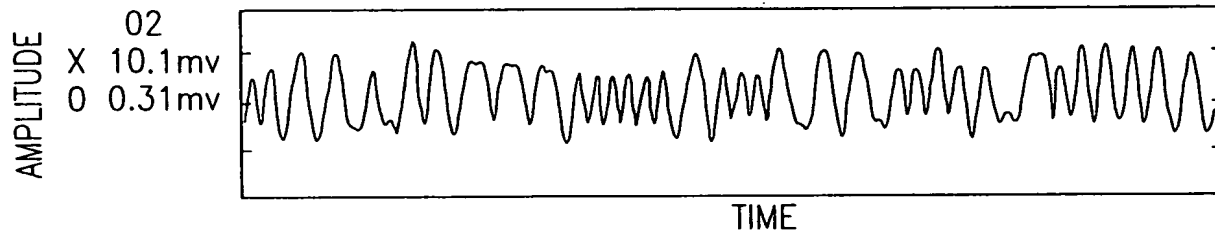


FIG.84D

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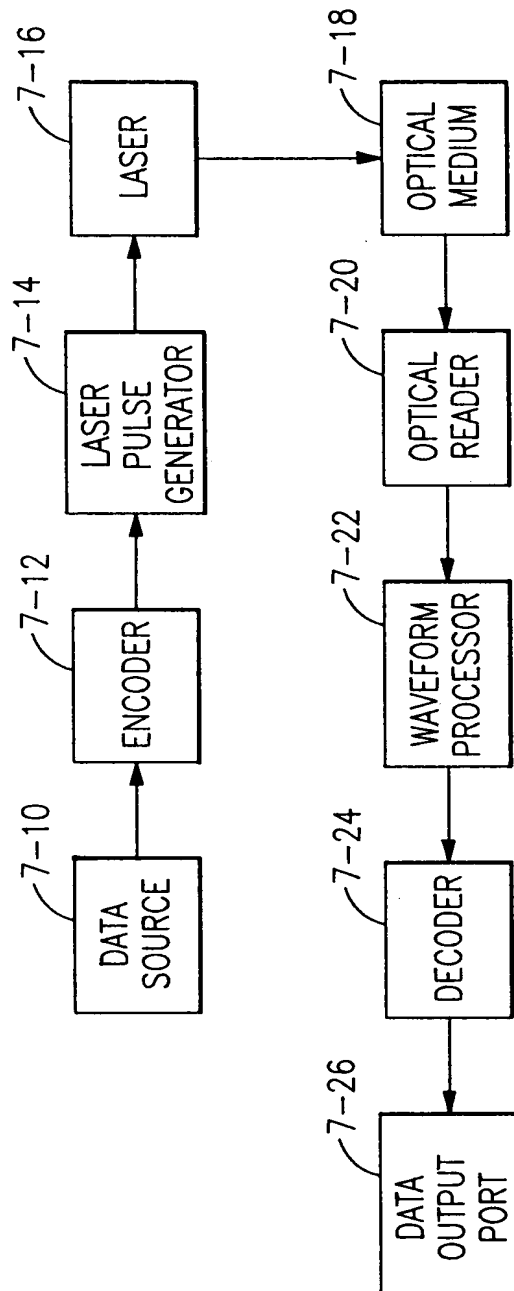


FIG.85

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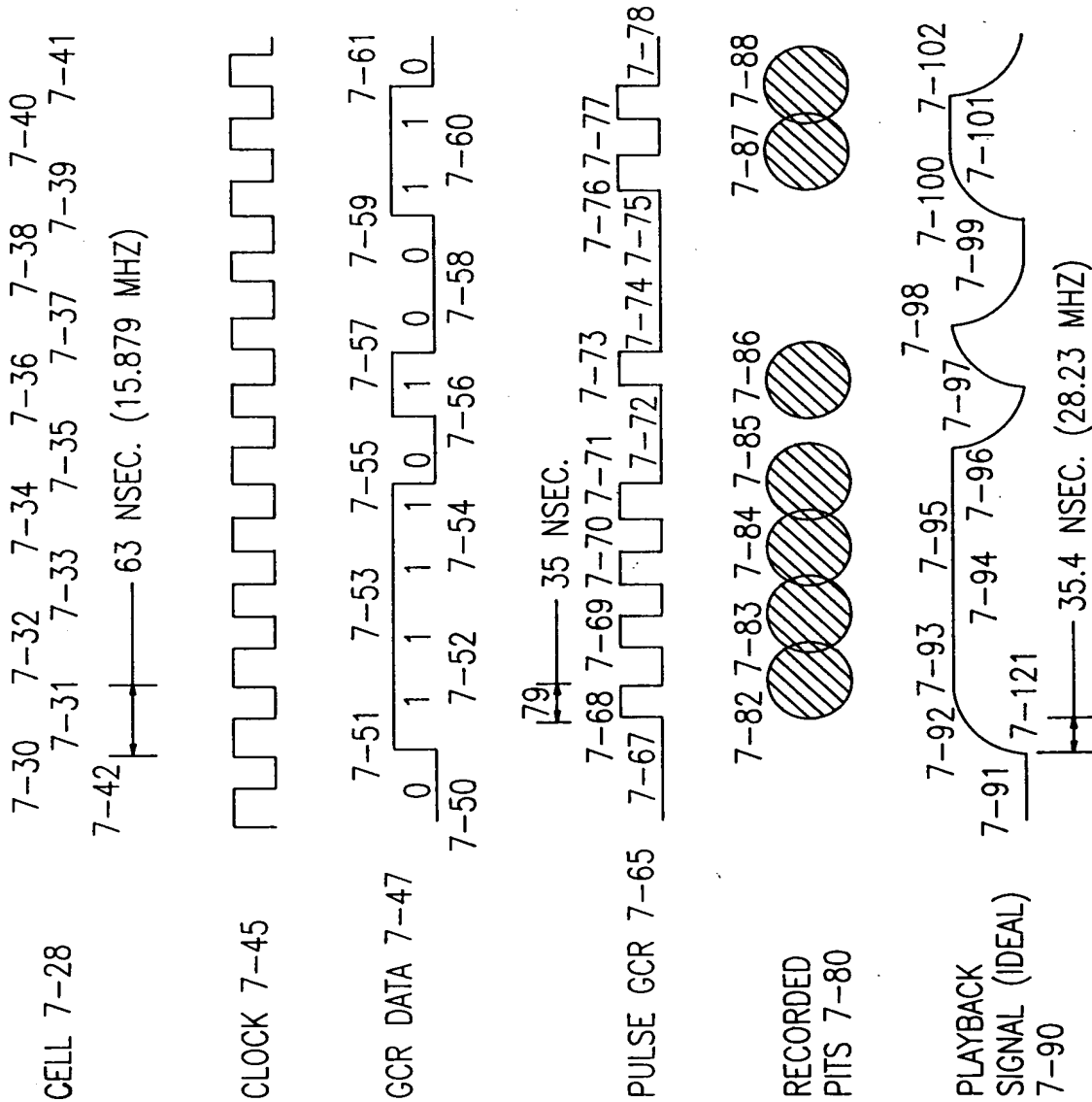


FIG. 86A

FIG. 86A
FIG. 86B
FIG. 86

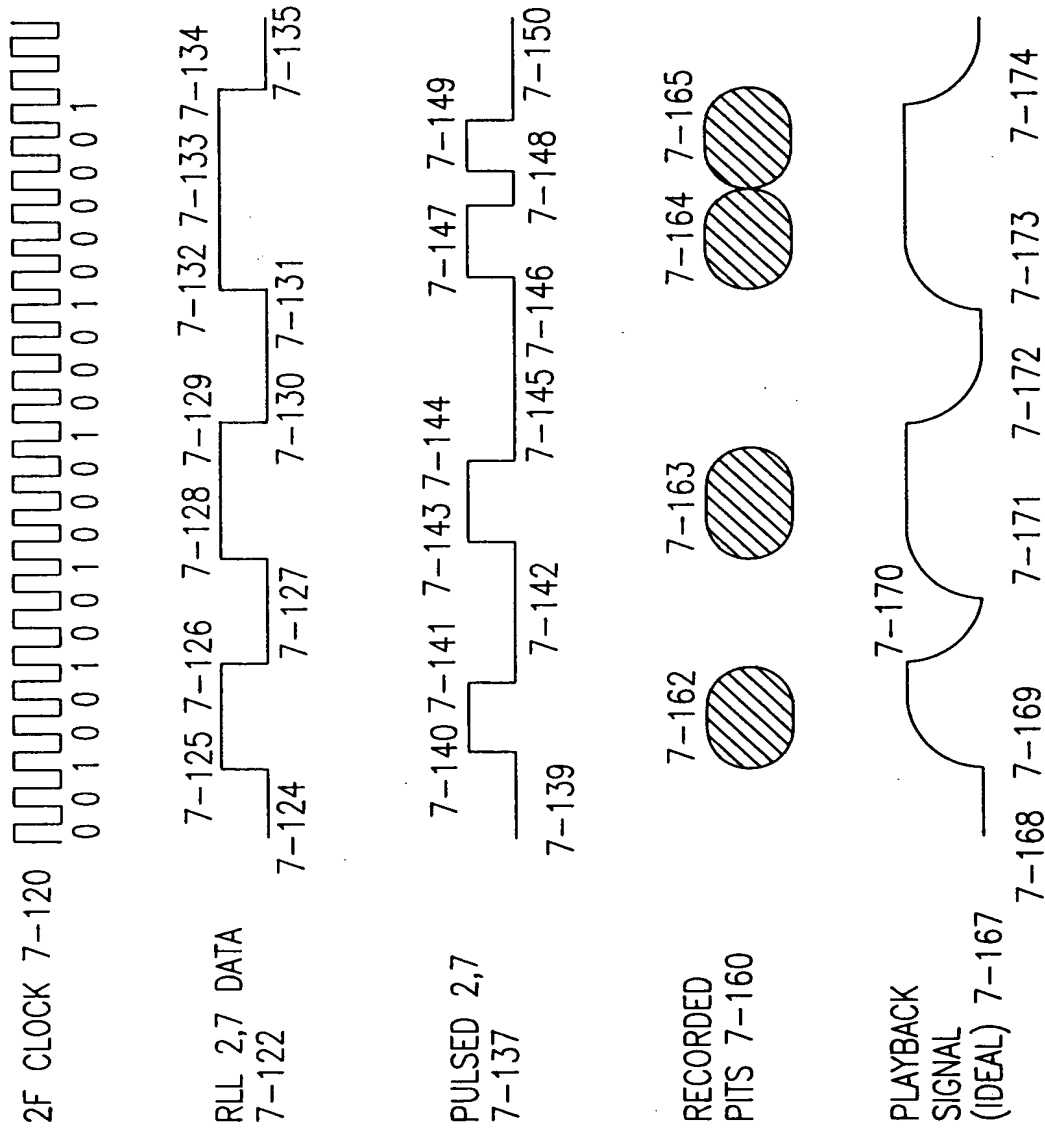
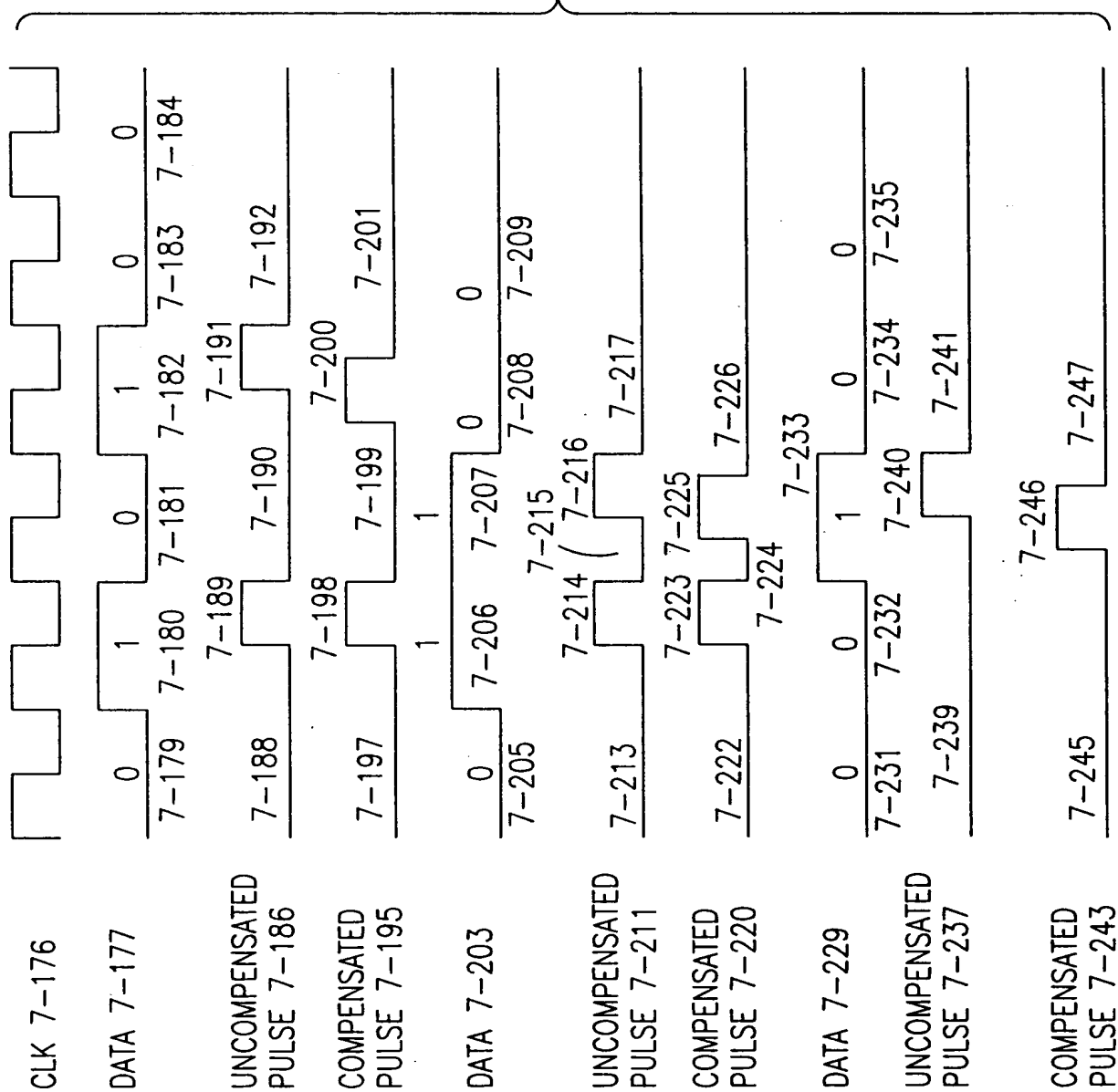


FIG. 86B



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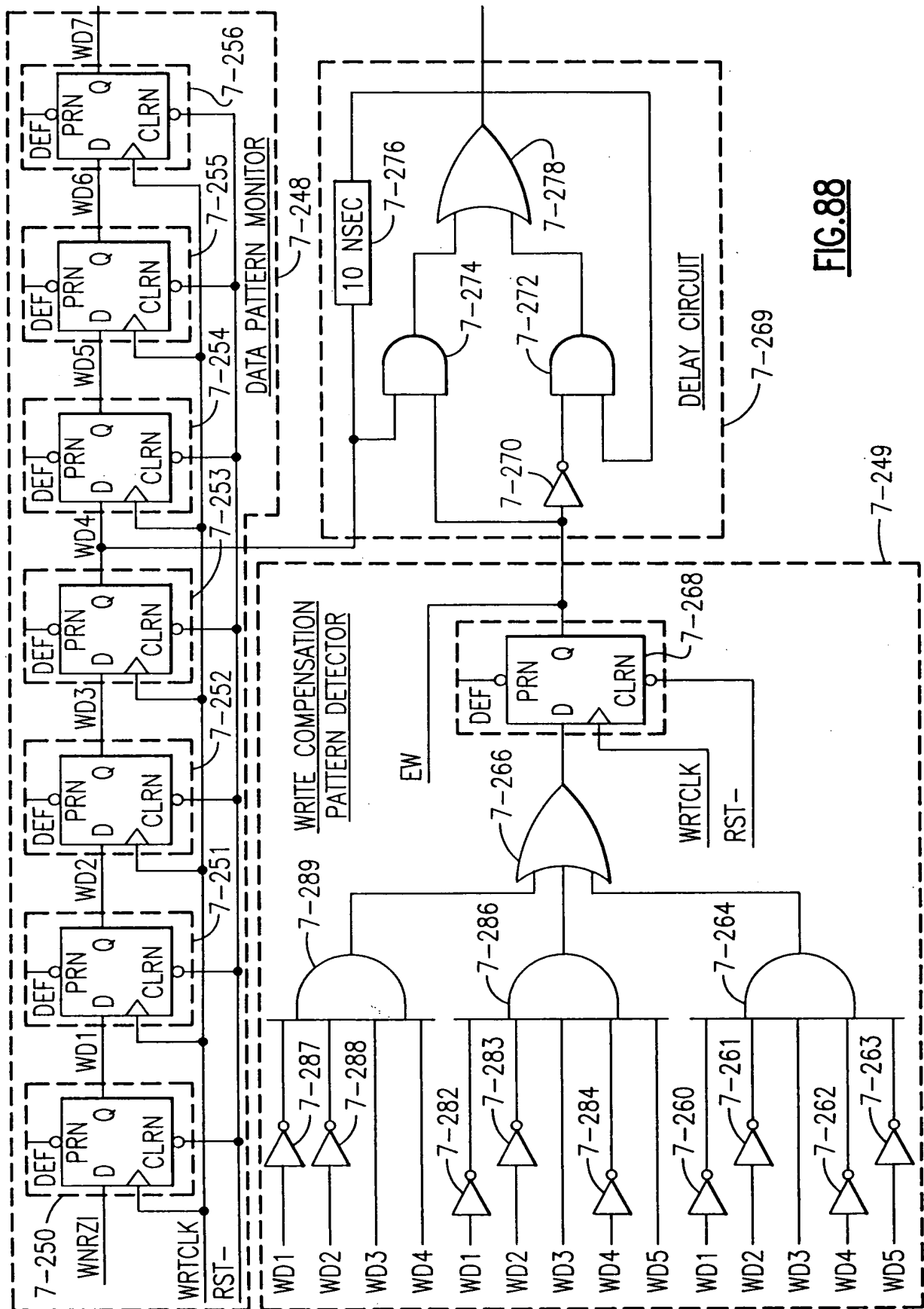


FIG.88

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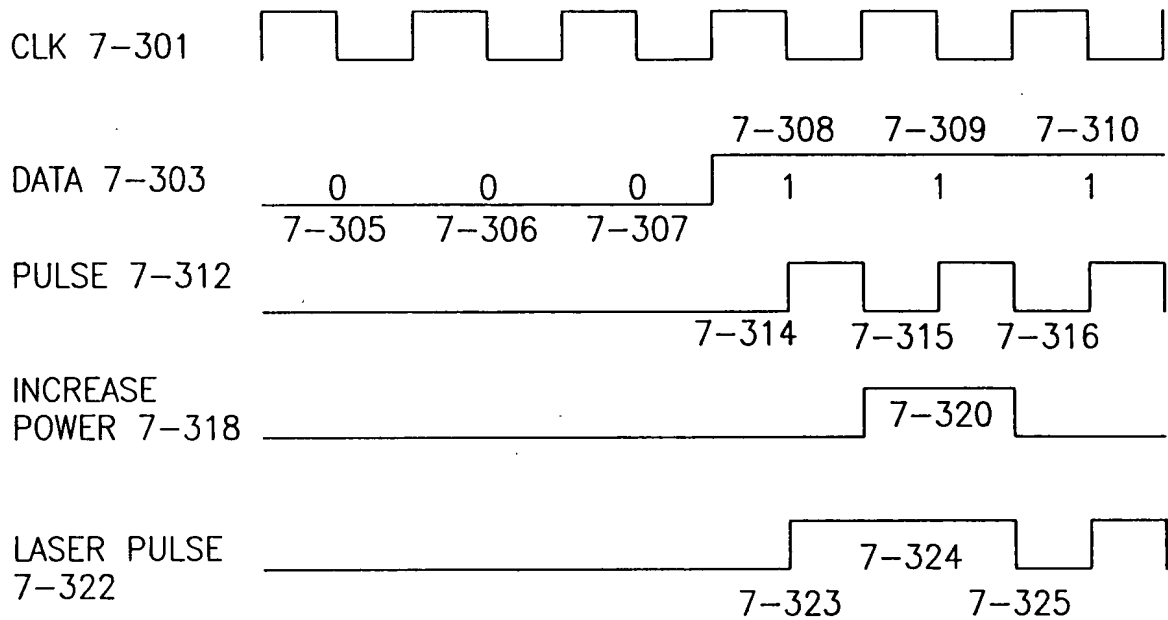


FIG.89

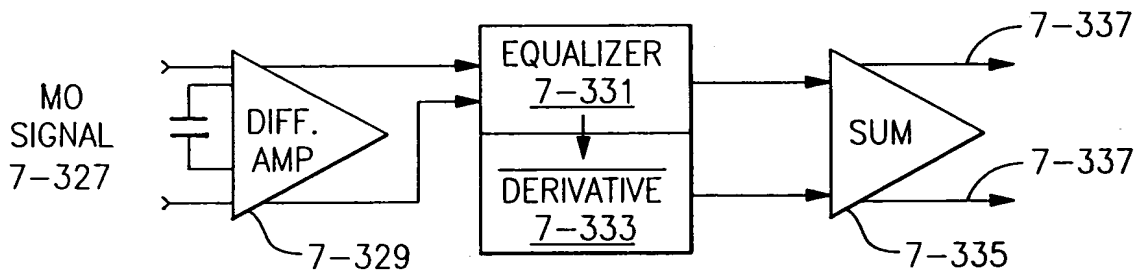
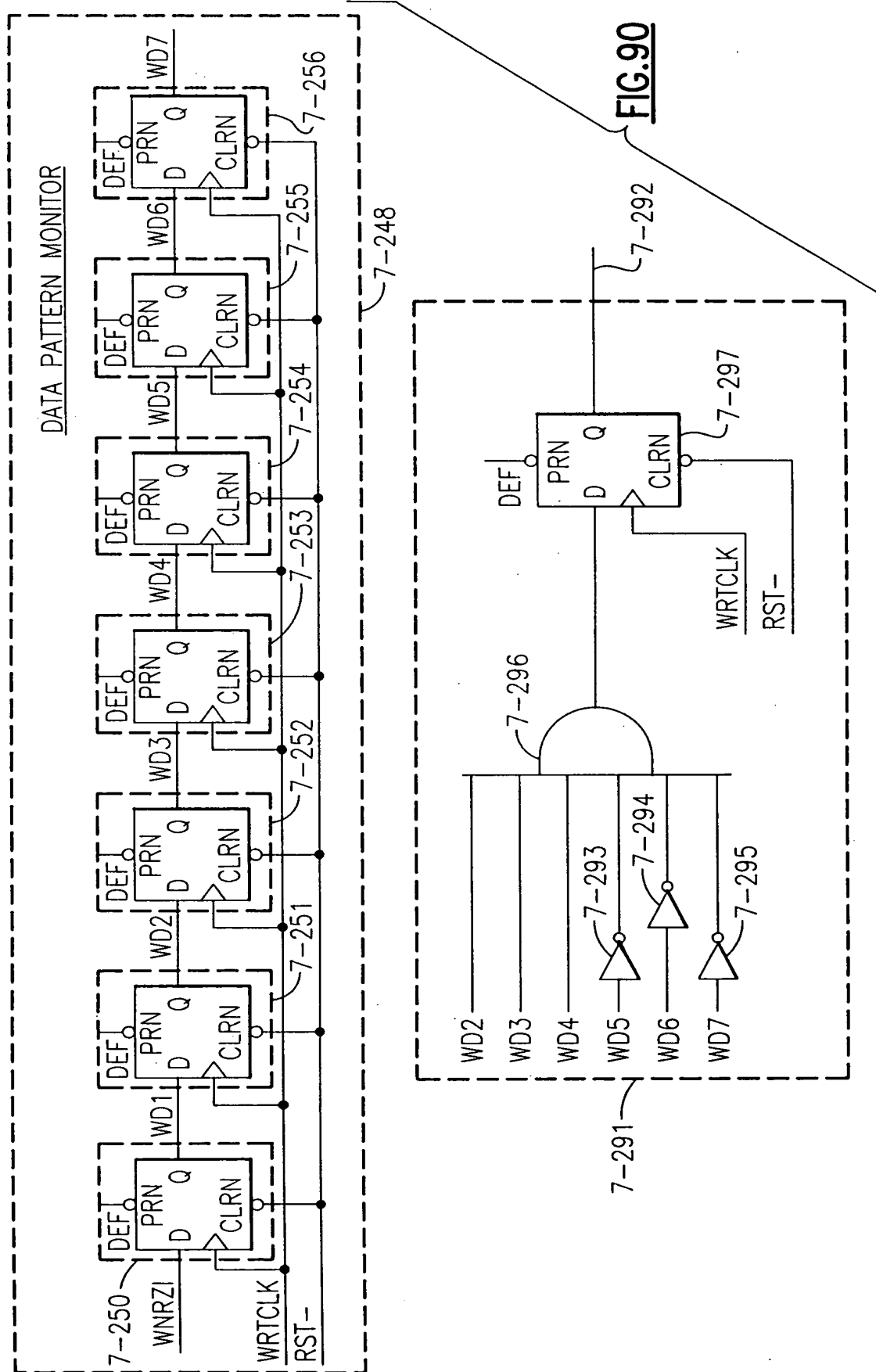


FIG.91

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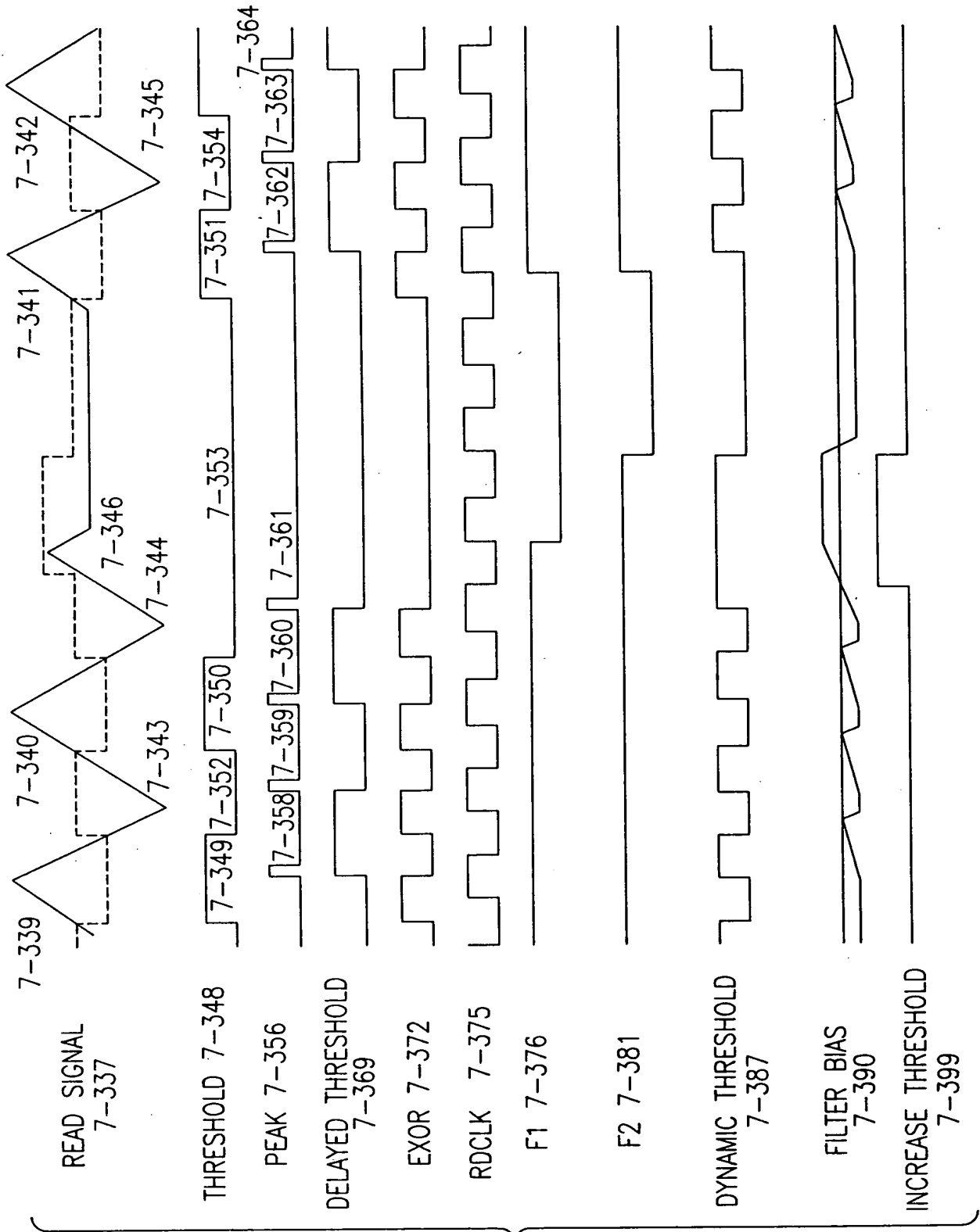
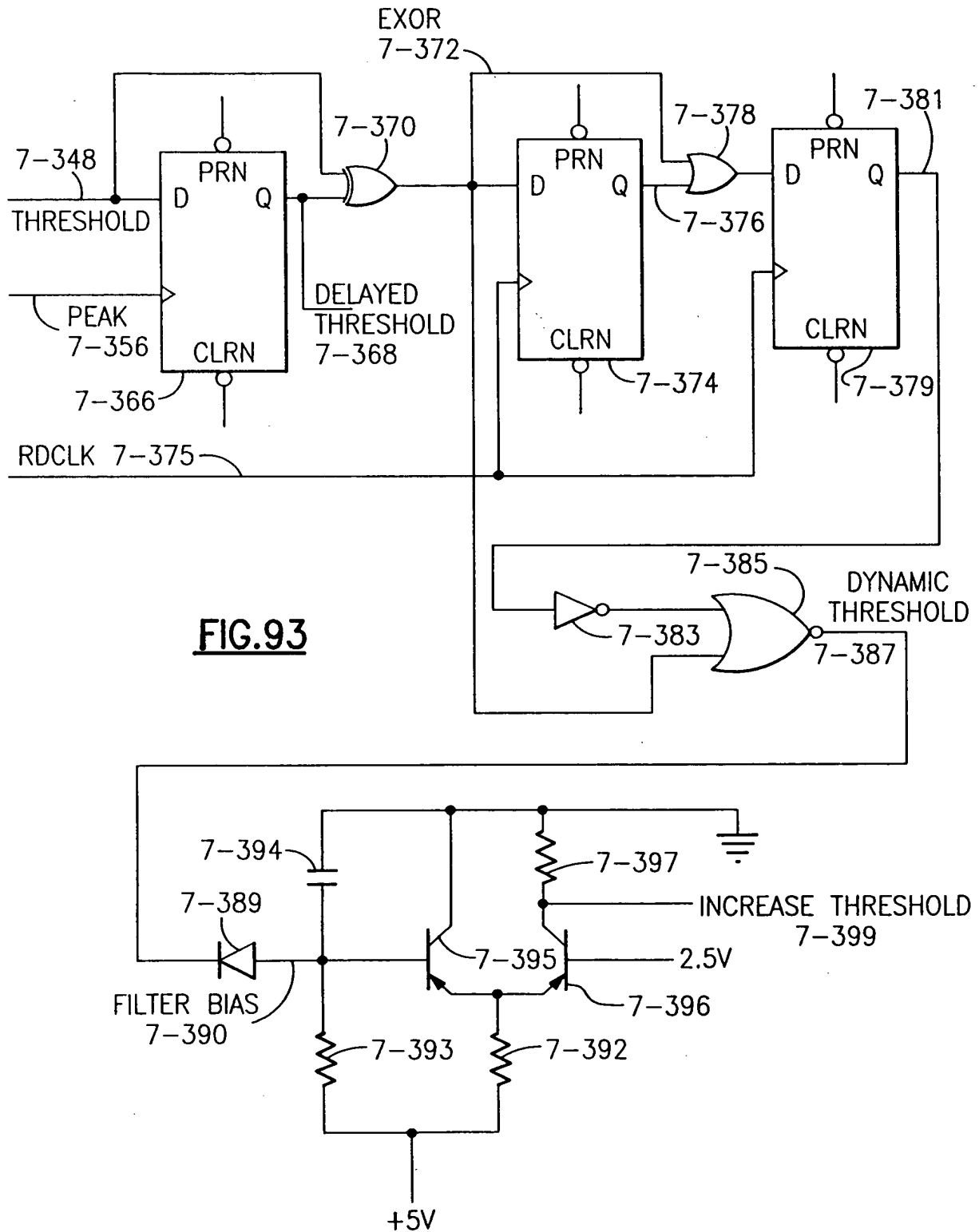


FIG. 92

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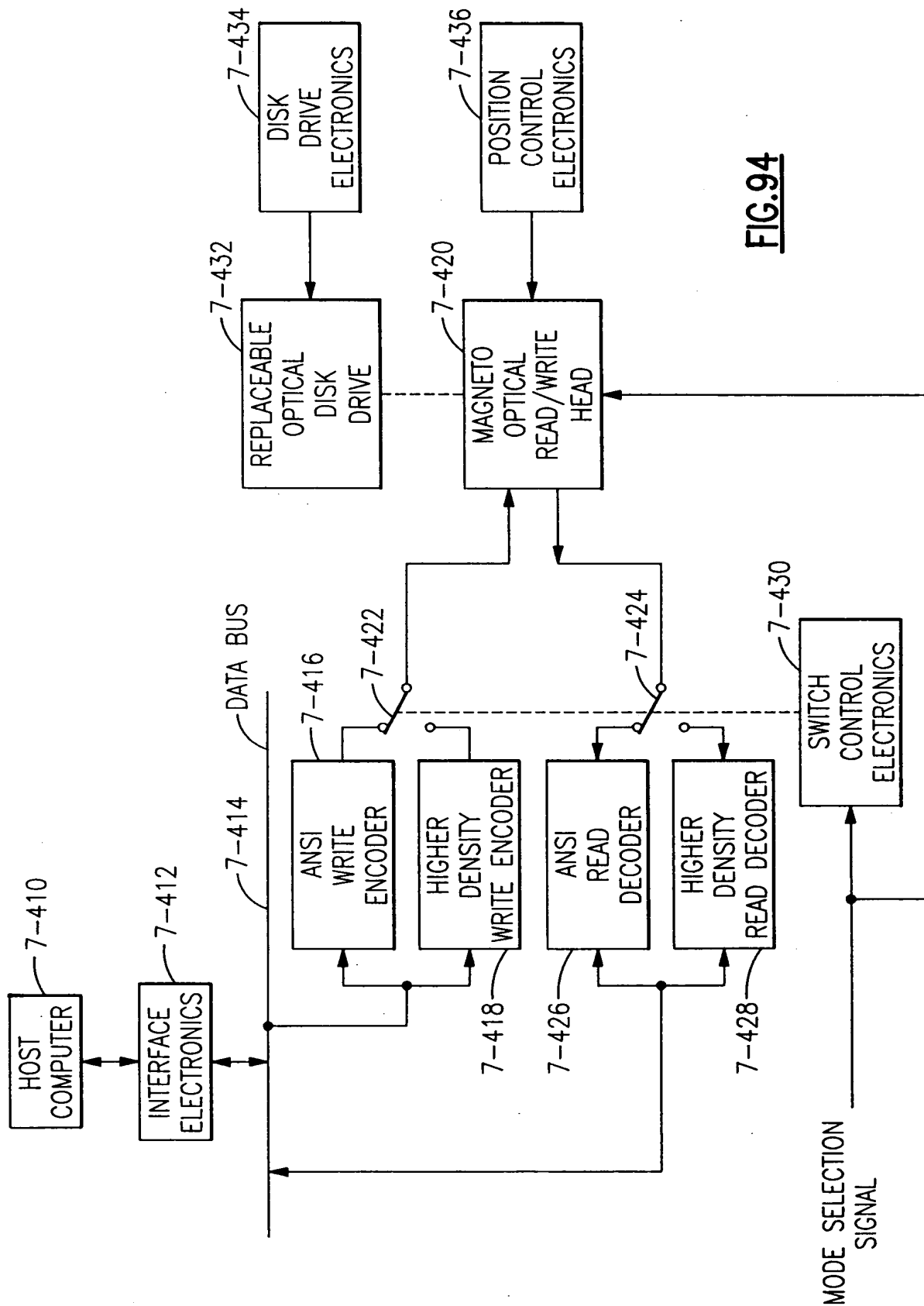
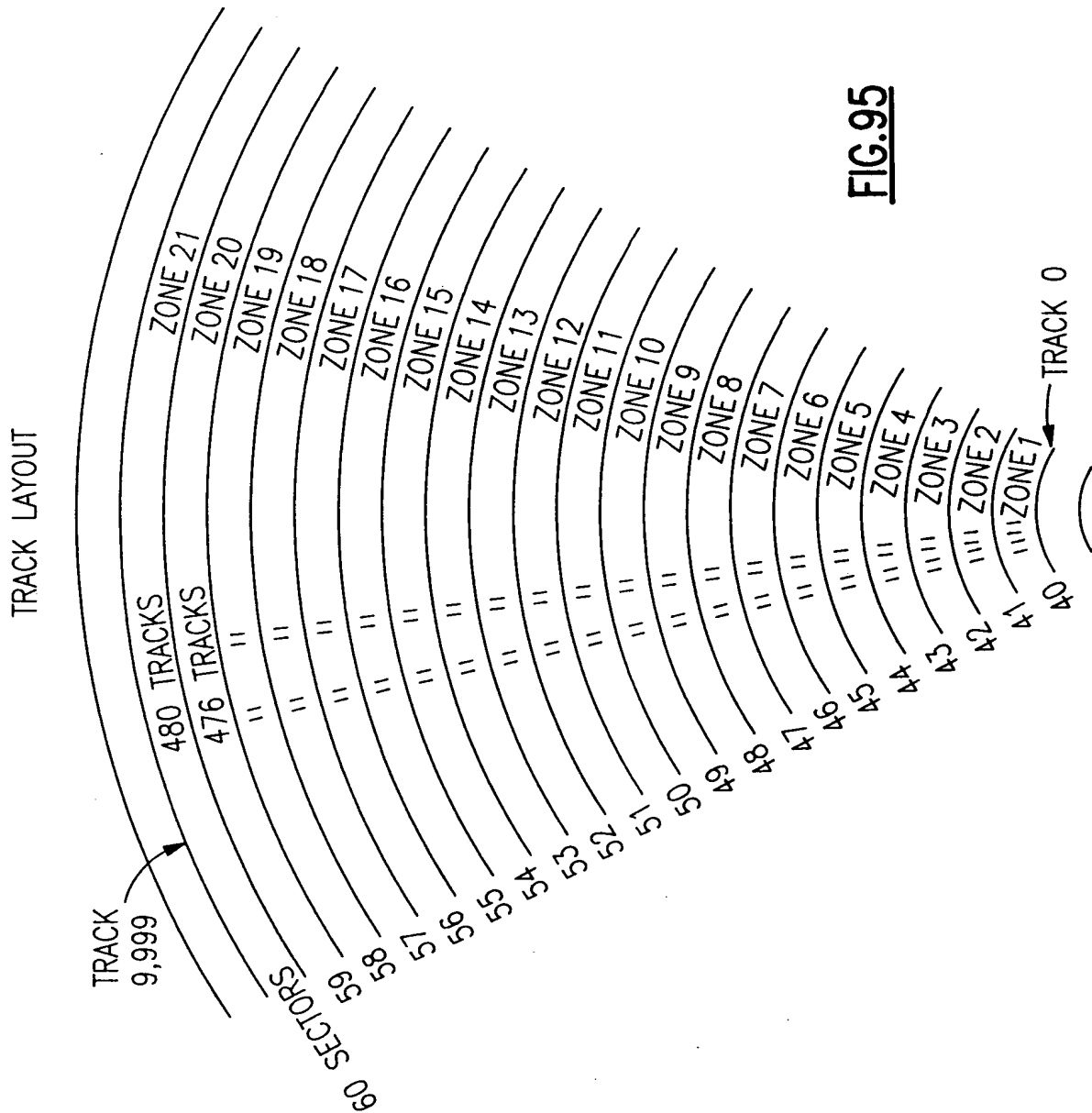


FIG. 94



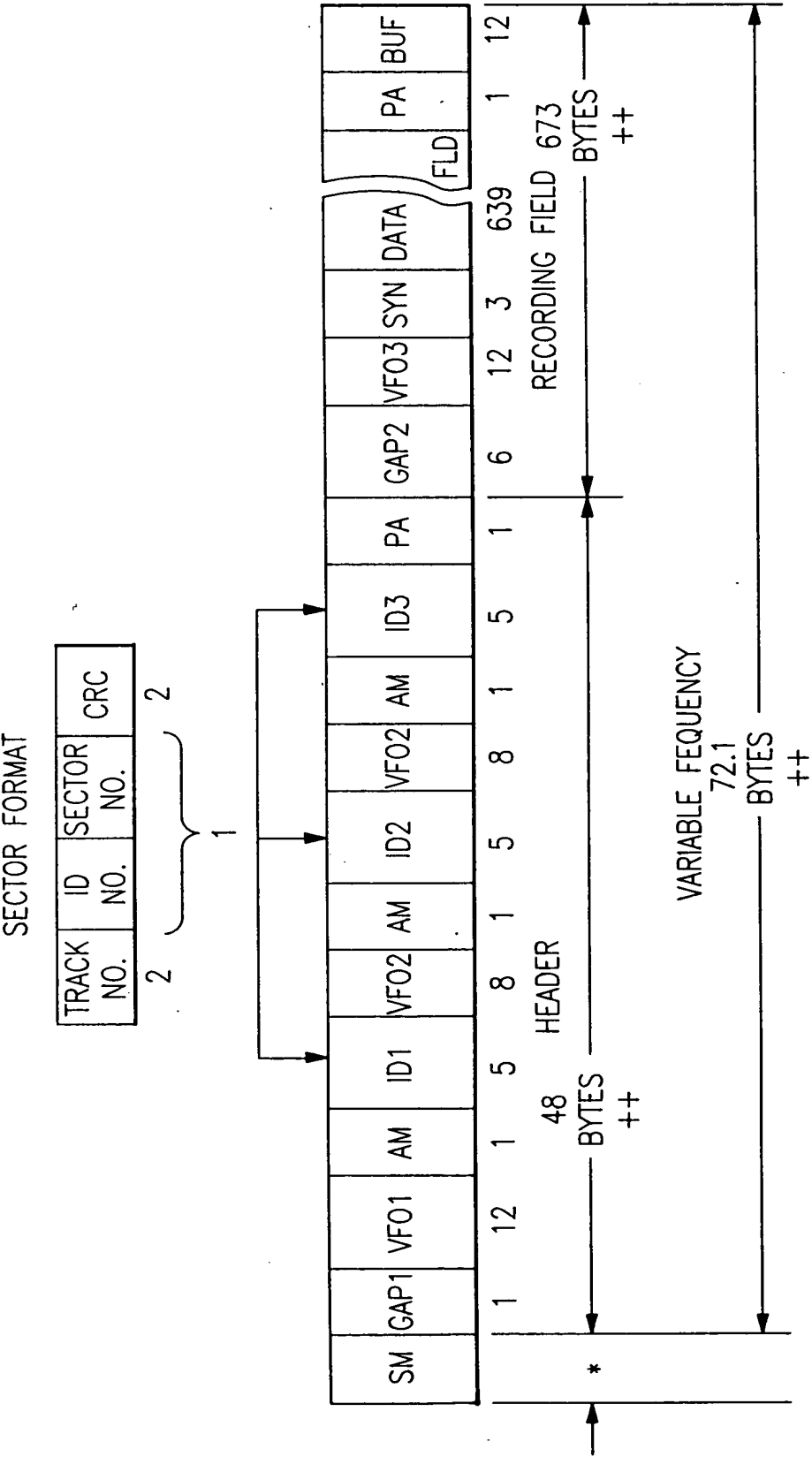


FIG.96

* FIXED FREQUENCY
80 CHANNEL BITS
++ 1 BYTE = 9 CHANNEL BITS

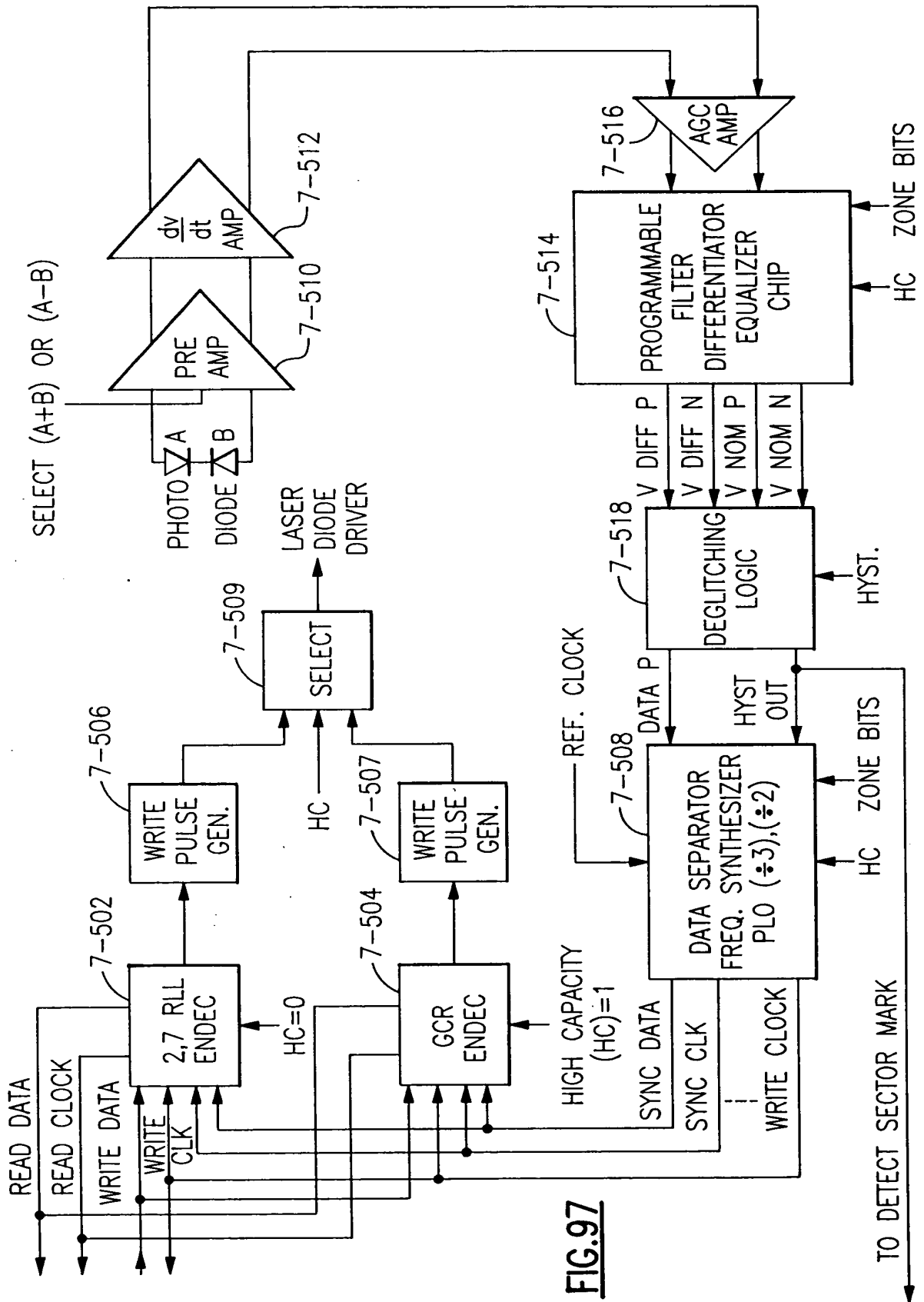


FIG. 97

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ZONE	(ABSOLUTE)	NO. OF SECTORS PER TRACK	NO. OF SEC./ZONE	WRITE FREQ. (MHZ)
1	0 - 475	40	19040	10.591
2	476 - 951	41	19516	10.852
3	952 - 1427	42	19992	11.117
4	1428 - 1903	43	20468	11.368
5	1904 - 2379	44	20944	11.636
6	2380 - 2855	45	21420	11.963
7	2856 - 3331	46	21896	12.180
8	3332 - 3807	47	22372	12.459
9	3808 - 4283	48	22848	12.705
10	4284 - 4759	49	23324	12.992
11	4760 - 5235	50	23800	13.257
12	5236 - 5711	51	24276	13.533
13	5712 - 6187	52	24752	13.831
14	6188 - 6663	53	25228	14.086
15	6664 - 7139	54	25704	14.362
16	7140 - 7615	55	26180	14.626
17	7616 - 8091	56	26656	14.914
18	8092 - 8567	57	27132	15.130
19	8568 - 9043	58	27608	15.467
20	9044 - 9519	59	28084	15.694
21	9520 - 9999	60	28800	15.950
			TOTAL SEC. 500,040 x 512 B/S = 256.02 MB	

FIG.98

FIG.99

CRC FOR ID FIELDS	
(1)	$G(x) = x^{16} + x^{12} + x^5 + 1$
(2)	$R(x) = \left(\sum_{i=8}^{i=23} \bar{b}_i x^i + \sum_{i=0}^{i=7} b_i x^i \right) x^{16} \text{ Mod } G(x)$
(3)	$R_C(x) = \sum_{k=0}^{k=15} c_k x^k$

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8 BIT BYTE		ENCODED	8 BIT BYTE		ENCODED
HEX	BINARY	9 BIT BYTE	HEX	BINARY	9 BIT BYTE
00	00000000	011001011	40	01000000	010001011
01	00000001	011001001	41	01000001	010001001
02	00000010	001001101	42	01000010	010010010
03	00000011	101100011	43	01000011	010010011
04	00000100	011001010	44	01000100	010001010
05	00000101	101100101	45	01000101	010010101
06	00000110	101100110	46	01000110	010010110
07	00000111	101100111	47	01000111	010010111
08	00001000	011001111	48	01001000	010001111
09	00001001	101101001	49	01001001	010011001
0A	00001010	101101010	4A	01001010	010011010
0B	00001011	101101011	4B	01001011	010011011
0C	00001100	011001110	4C	01001100	010001110
0D	00001101	101101101	4D	01001101	010011101
0E	00001110	101101110	4E	01001110	010011110
0F	00001111	101101111	4F	01001111	010011111
10	00010000	001001011	50	01010000	011100101
11	00010001	001001001	51	01010001	001100101
12	00010010	011001101	52	01010010	010110010
13	00010011	100100011	53	01010011	010110011
14	00010100	001001010	54	01010100	010100101
15	00010101	100100101	55	01010101	010110101
16	00010110	100100110	56	01010110	010110110
17	00010111	100100111	57	01010111	010110111
18	00011000	001001111	58	01011000	111100101
19	00011001	100101001	59	01011001	010111001
1A	00011010	100101010	5A	01011010	010111010
1B	00011011	100101011	5B	01011011	010111011
1C	00011100	001001110	5C	01011100	110100101
1D	00011101	100101101	5D	01011101	010111101
1E	00011110	100101110	5E	01011110	010111110
1F	00011111	100101111	5F	01011111	010111111

FIG.100A(1)

FIG.
100A(1)

FIG.
100A(2)

FIG.100A

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20	00100000	101001111	60	01100000	011100110				
21	00100001	101001101	61	01100001	001100110				
22	00100010	001010010	62	01100010	011010010				
23	00100011	001010011	63	01100011	011010011				
24	00100100	101001110	64	01100100	010100110				
25	00100101	001010101	65	01100101	011010101				
26	00100110	001010110	66	01100110	011010110				
27	00100111	001010111	67	01100111	011010111				
28	00101000	101001011	68	01101000	111100110				
29	00101001	001011001	69	01101001	011011001				
2A	00101010	001011010	6A	01101010	011011010				
2B	00101011	001011011	6B	01101011	011011011				
2C	00101100	101001010	6C	01101100	110100110				
2D	00101101	001011101	6D	01101101	011011101				
2E	00101110	001011110	6E	01101110	011011110				
2F	00101111	001011111	6F	01101111	011011111				
30	00110000	011100011	70	01110000	011100111				
31	00110001	001100011	71	01110001	001100111				
32	00110010	001110010	72	01110010	011110010				
33	00110011	001110011	73	01110011	011110011				
34	00110100	010100011	74	01110100	010100111				
35	00110101	001110101	75	01110101	011110101				
36	00110110	001110110	76	01110110	011110110				
37	00110111	001110111	77	01110111	011110111				
38	00111000	111100011	78	01111000	111100111				
39	00111001	001111001	79	01111001	011111001				
3A	00111010	001111010	7A	01111010	011111010				
3B	00111011	001111011	7B	01111011	011111011				
3C	00111100	110100011	7C	01111100	110100111				
3D	00111101	001111101	7D	01111101	011111101				
3E	00111110	001111110	7E	01111110	011111110				
3F	00111111	001111111	7F	01111111	011111111				
POSITION IN BYTE	8	1	9	1	POSITION IN BYTE	8	1	9	1

FIG.100A(2)

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8 BIT BYTE		ENCODED	8 BIT BYTE		ENCODED
HEX	BINARY	9 BIT BYTE	HEX	BINARY	9 BIT BYTE
80	10000000	111001011	C0	11000000	110001011
81	10000001	111001001	C1	11000001	110001001
82	10000010	100010010	C2	11000010	110010010
83	10000011	100010011	C3	11000011	110010011
84	10000100	111001010	C4	11000100	110001010
85	10000101	100010101	C5	11000101	110010101
86	10000110	100010110	C6	11000110	110010110
87	10000111	100010111	C7	11000111	110010111
88	10001000	111001111	C8	11001000	110001111
89	10001001	100011001	C9	11001001	110011001
8A	10001010	100011010	CA	11001010	110011010
8B	10001011	100011011	CB	11001011	110011011
8C	10001100	111001110	CC	11001100	110001110
8D	10001101	100011101	CD	11001101	110011101
8E	10001110	100011110	CE	11001110	110011110
8F	10001111	100011111	CF	11001111	110011111
90	10010000	011101001	D0	11010000	011101101
91	10010001	001101001	D1	11010001	001101101
92	10010010	100110010	D2	11010010	110110010
93	10010011	100110011	D3	11010011	110110011
94	10010100	010101001	D4	11010100	010101101
95	10010101	100110101	D5	11010101	110110101
96	10010110	100110110	D6	11010110	110110110
97	10010111	100110111	D7	11010111	110110111
98	10011000	111101001	D8	11011000	111101101
99	10011001	100111001	D9	11011001	110111001
9A	10011010	100111010	DA	11011010	110111010
9B	10011011	100111011	DB	11011011	110111011
9C	10011100	110101001	DC	11011100	110101101
9D	10011101	100111101	DD	11011101	110111101
9E	10011110	100111110	DE	11011110	110111110
9F	10011111	100111111	DF	11011111	110111111

FIG.100B(1)

FIG.
100B(1)

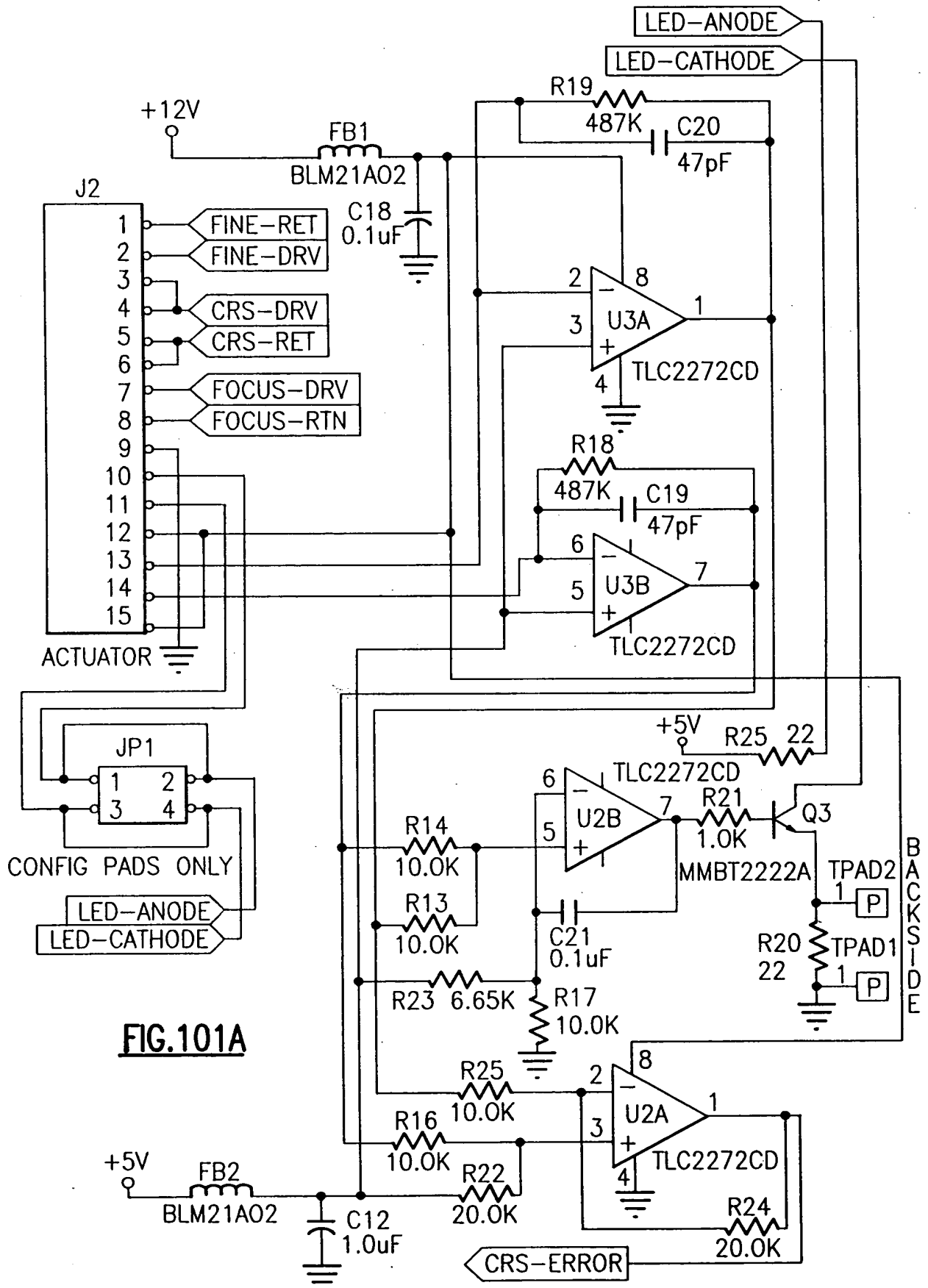
FIG.
100B(2)

FIG.100B

A0	10100000	011101010	E0	11100000	011101110				
A1	10100001	001101010	E1	11100001	001101110				
A2	10100010	101010010	E2	11100010	111010010				
A3	10100011	101010011	E3	11100011	111010011				
A4	10100100	010101010	E4	11100100	010101110				
A5	10100101	101010101	E5	11100101	111010101				
A6	10100110	101010110	E6	11100110	111010110				
A7	10100111	101010111	E7	11100111	111010111				
A8	10101000	111101010	E8	11101000	111101110				
A9	10101001	101011001	E9	11101001	111011001				
AA	10101010	101011010	EA	11101010	111011010				
AB	10101011	101011011	EB	11101011	111011011				
AC	10101100	110101010	EC	11101100	110101110				
AD	10101101	101011101	ED	11101101	111011101				
AE	10101110	101011110	EE	11101110	111011110				
AF	10101111	101011111	EF	11101111	111011111				
B0	10110000	011101011	F0	11110000	011101111				
B1	10110001	001101011	F1	11110001	001101111				
B2	10110010	101110010	F2	11110010	111110010				
B3	10110011	101110011	F3	11110011	111110011				
B4	10110100	010101011	F4	11110100	010101111				
B5	10110101	101110101	F5	11110101	111110101				
B6	10110110	101110110	F6	11110110	111110110				
B7	10110111	101110111	F7	11110111	111110111				
B8	10111000	111101011	F8	11111000	111101111				
B9	10111001	101111001	F9	11111001	111111001				
BA	10111010	101111010	FA	11111010	111111010				
BB	10111011	101111011	FB	11111011	111111011				
BC	10111100	110101011	FC	11111100	110101111				
BD	10111101	101111101	FD	11111101	111111101				
BE	10111110	101111110	FE	11111110	111111110				
BF	10111111	101111111	FF	11111111	111111111				
POSITION IN BYTE	8	1	9	1	POSITION IN BYTE	8	1	9	1

FIG.100B(2)

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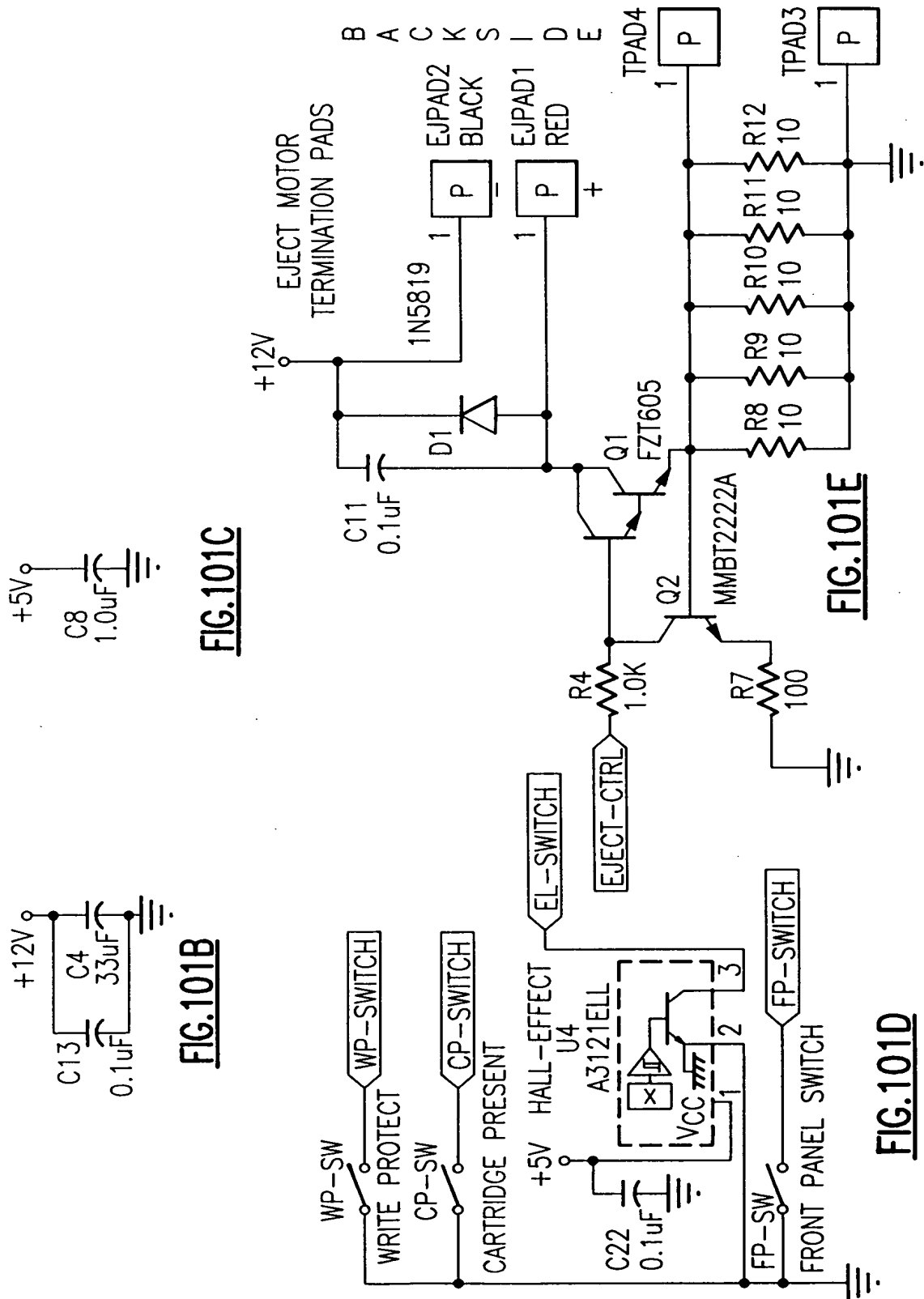


FIG. 101B

FIG. 101C

FIG. 101E

FIG. 101D

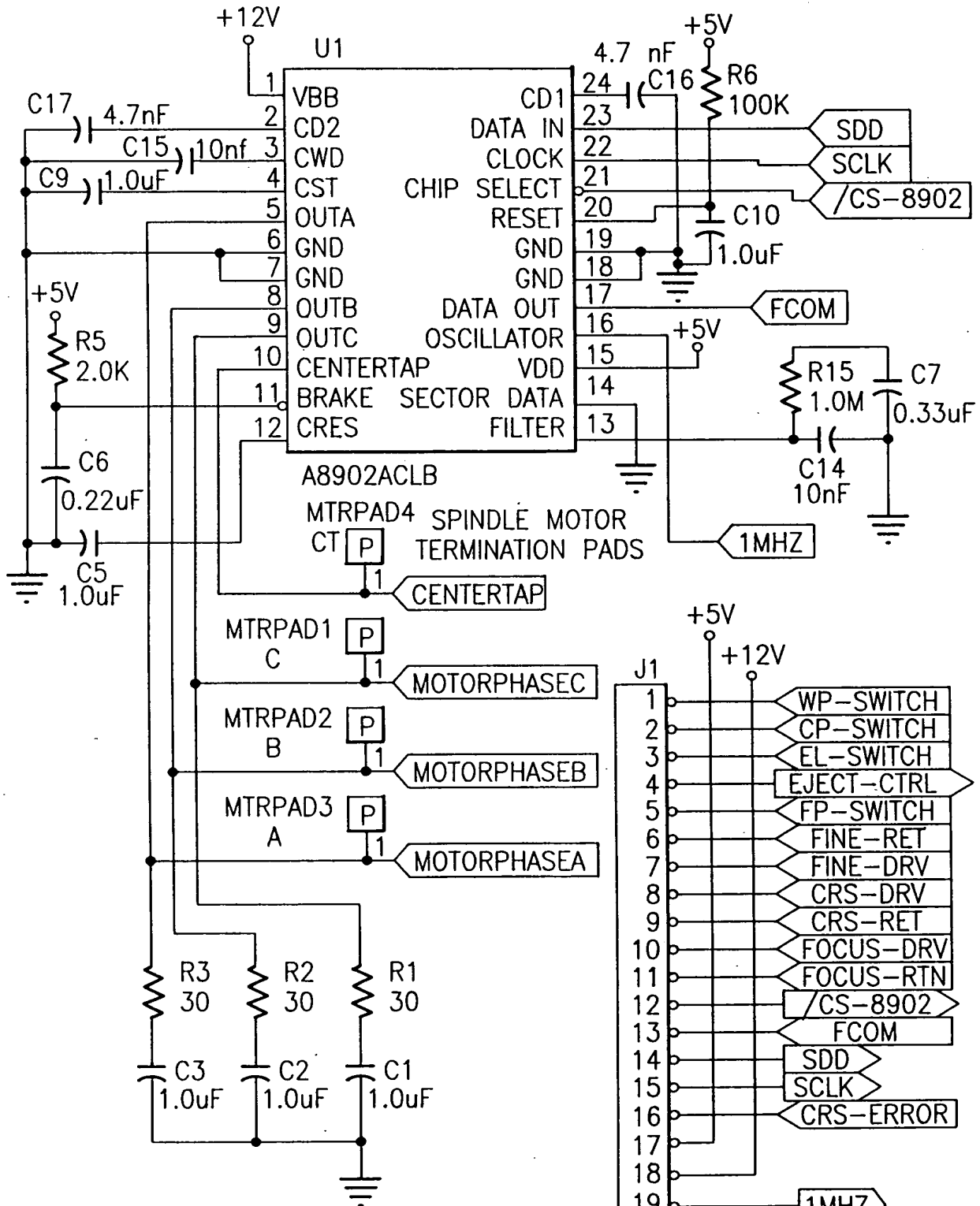


FIG.101F

FLEX
CABLE

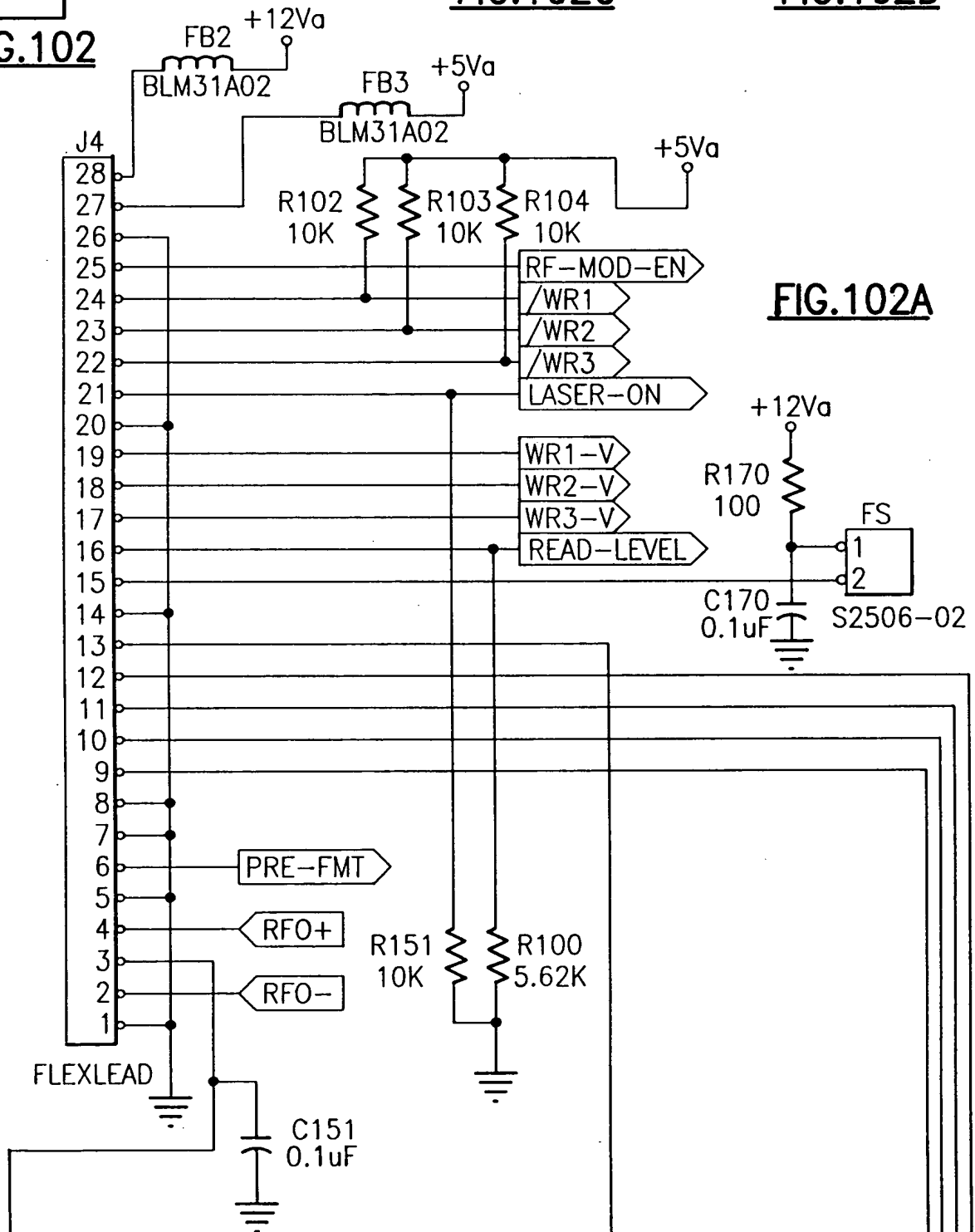
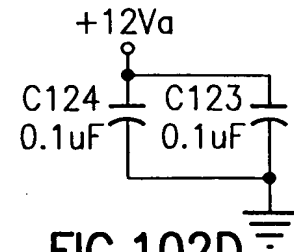
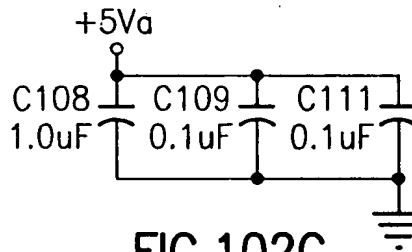
FIG.101G

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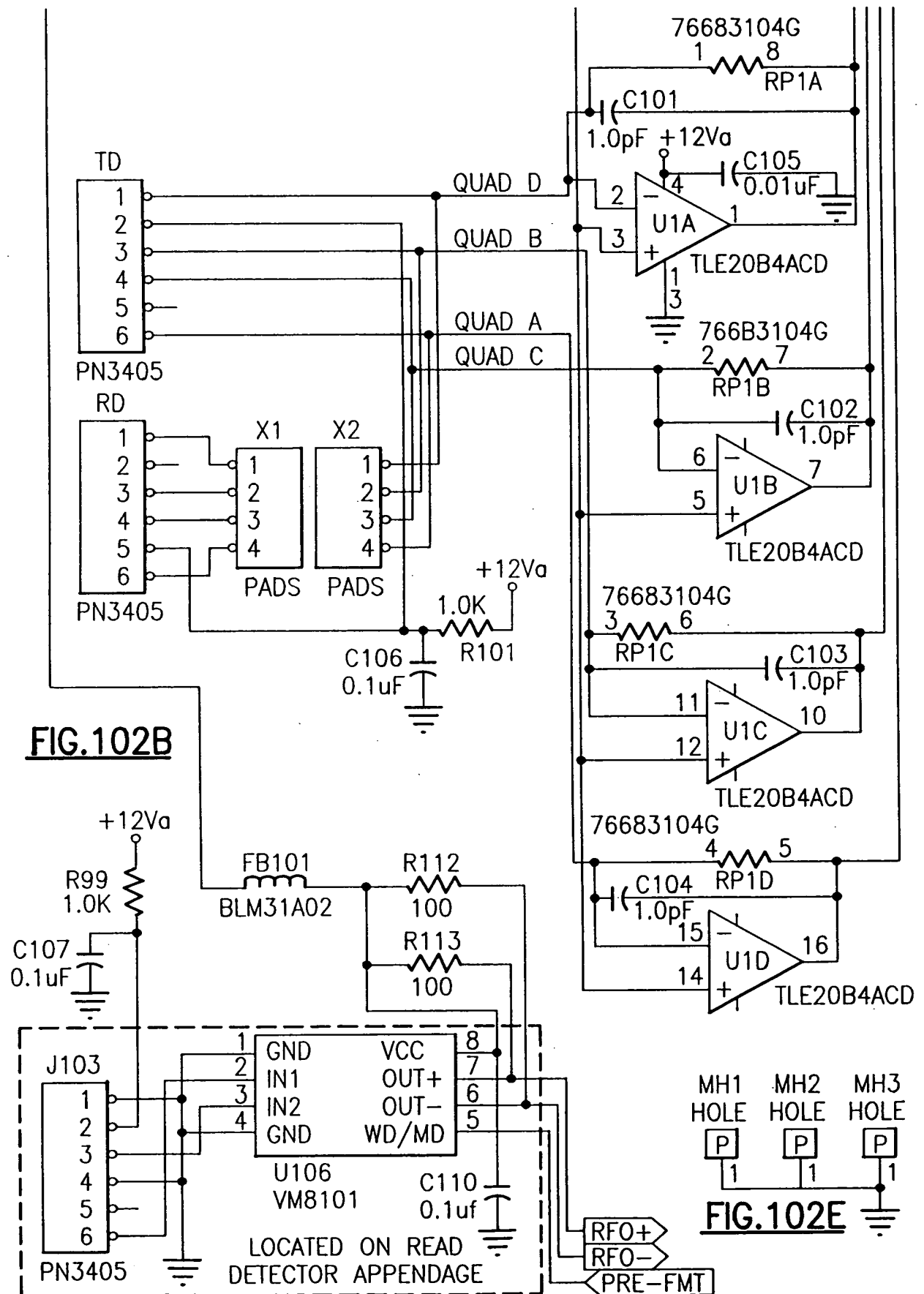
FIG.
102A

FIG.
102B

FIG.102



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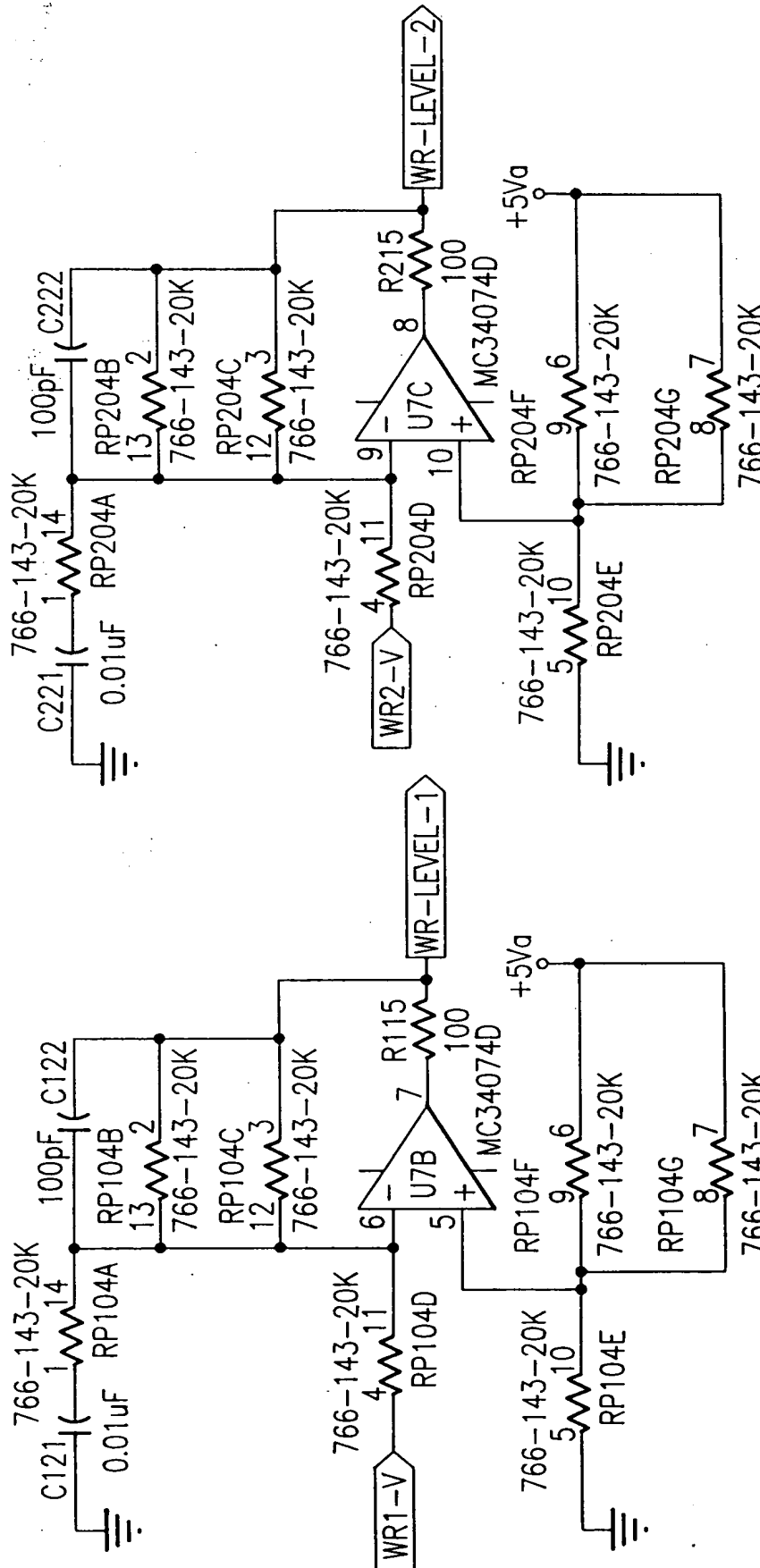


FIG. 103A

FIG. 103B

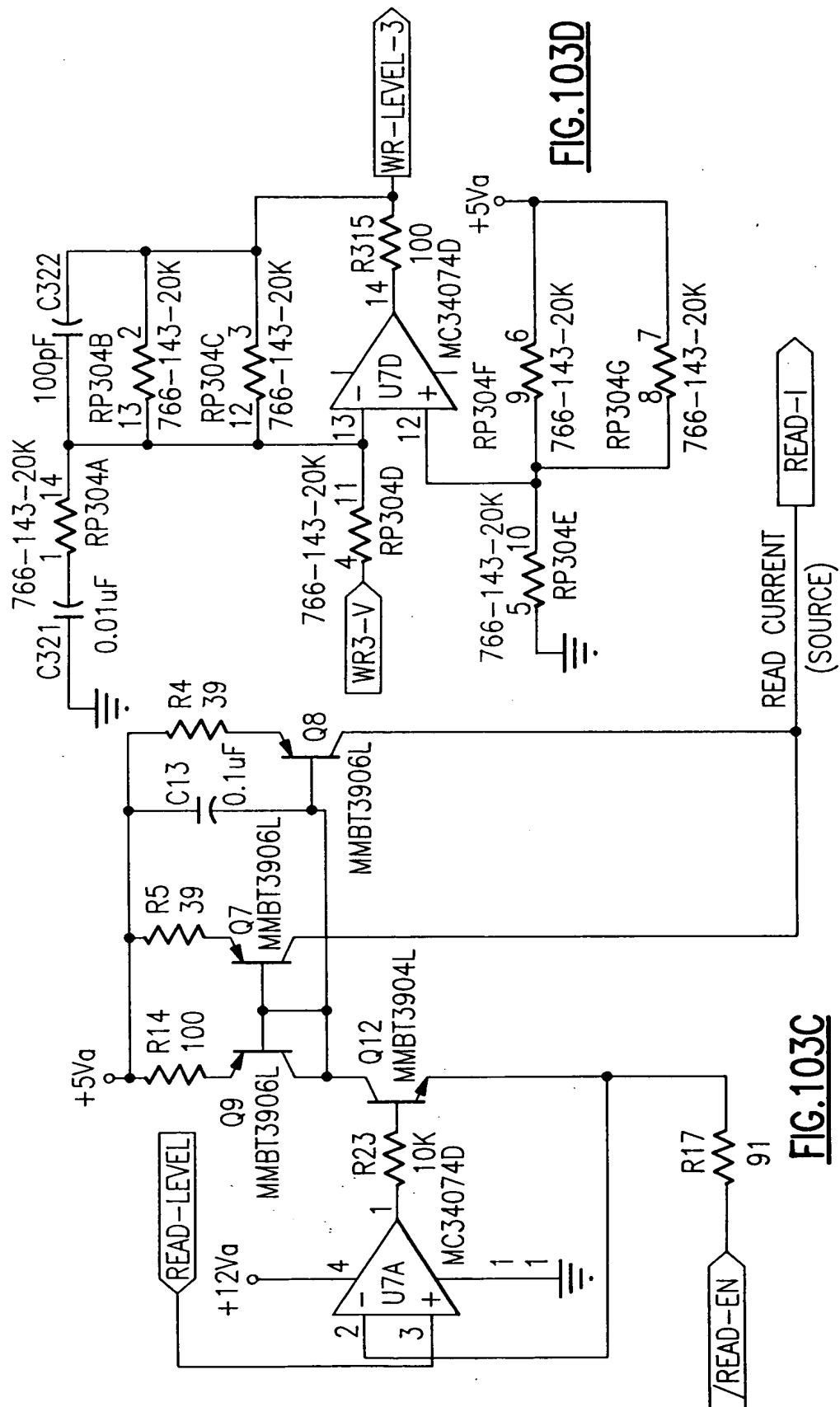


FIG. 103C

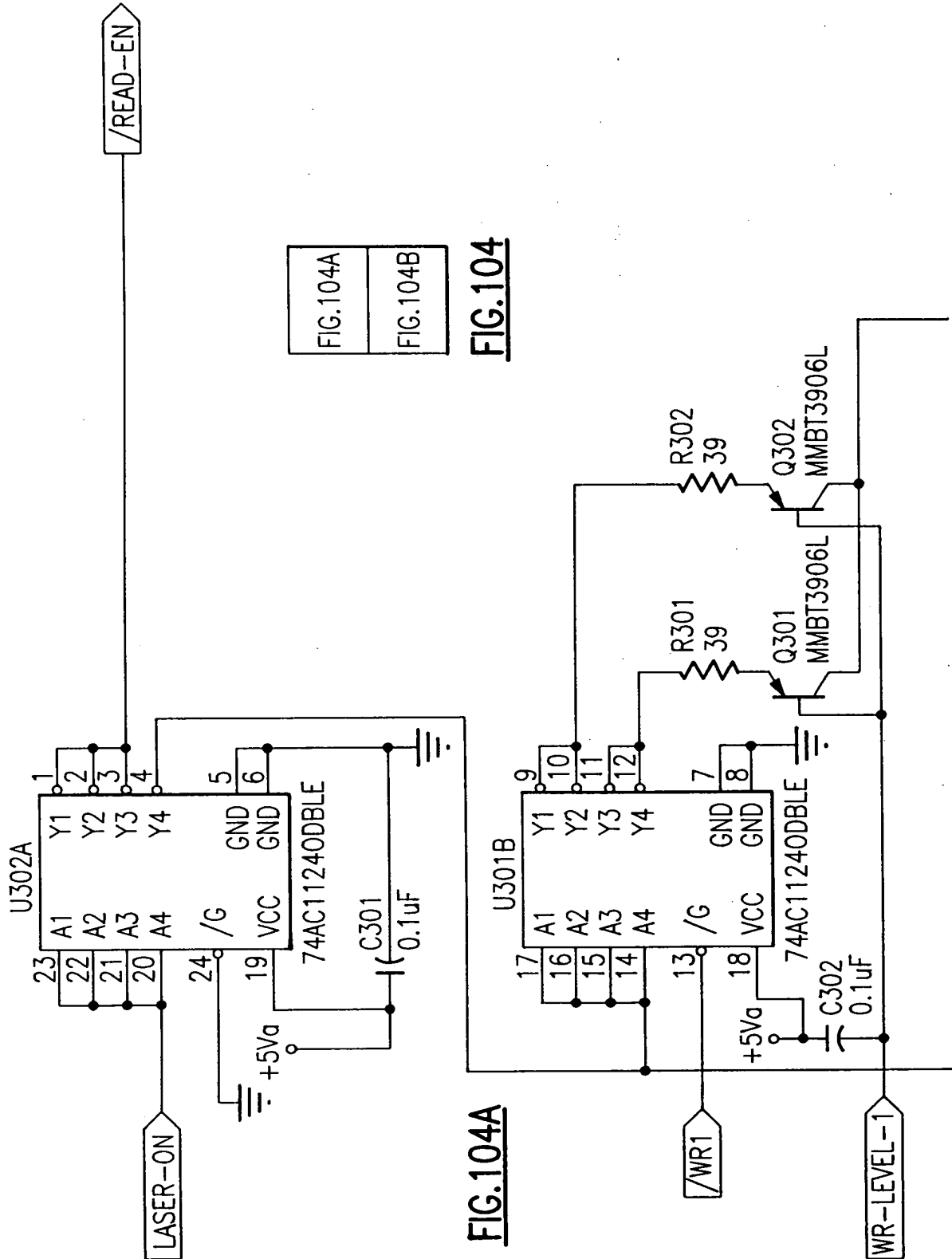
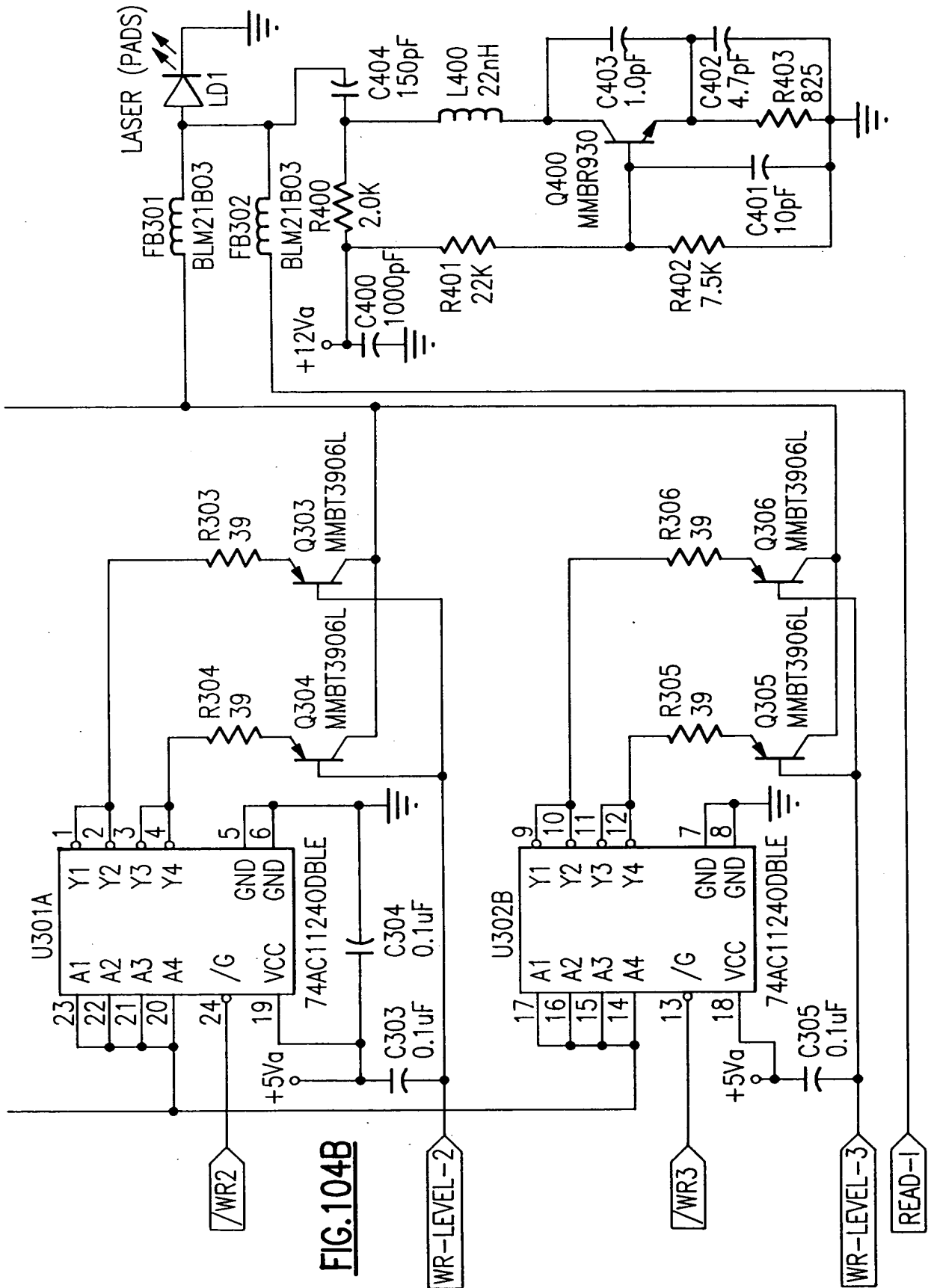


FIG.104A

FIG.104

FIG.104A
FIG.104B

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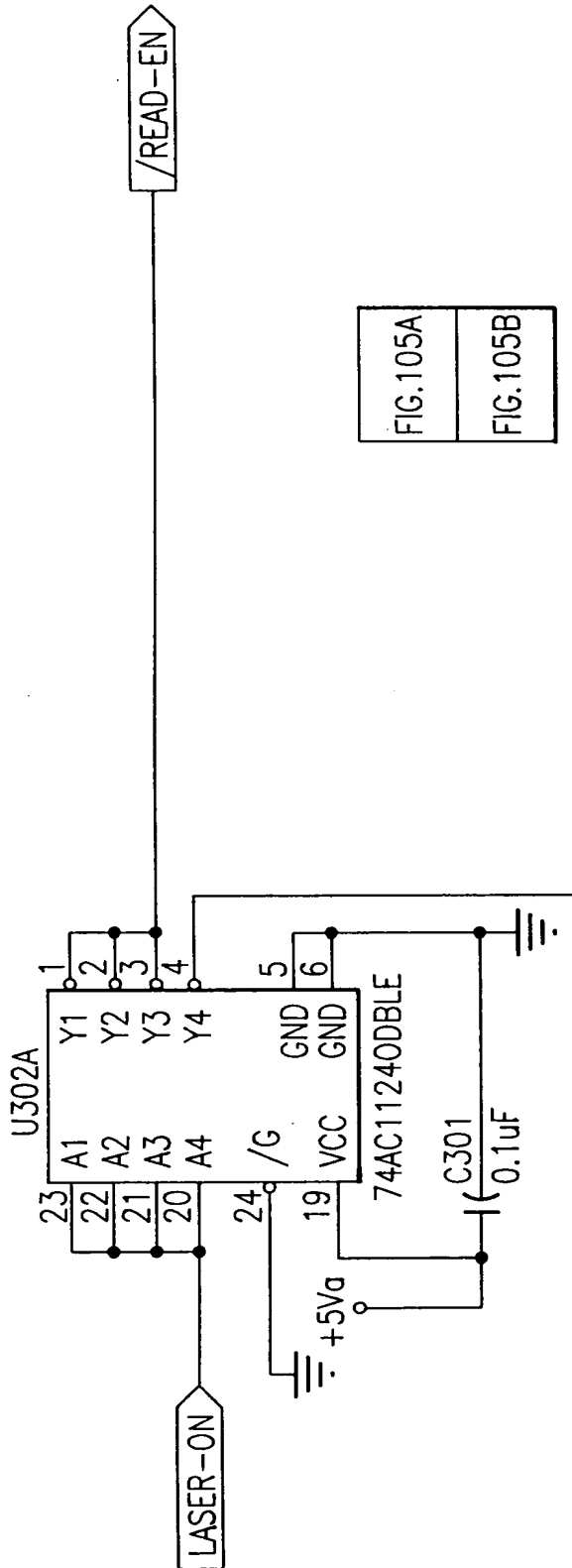
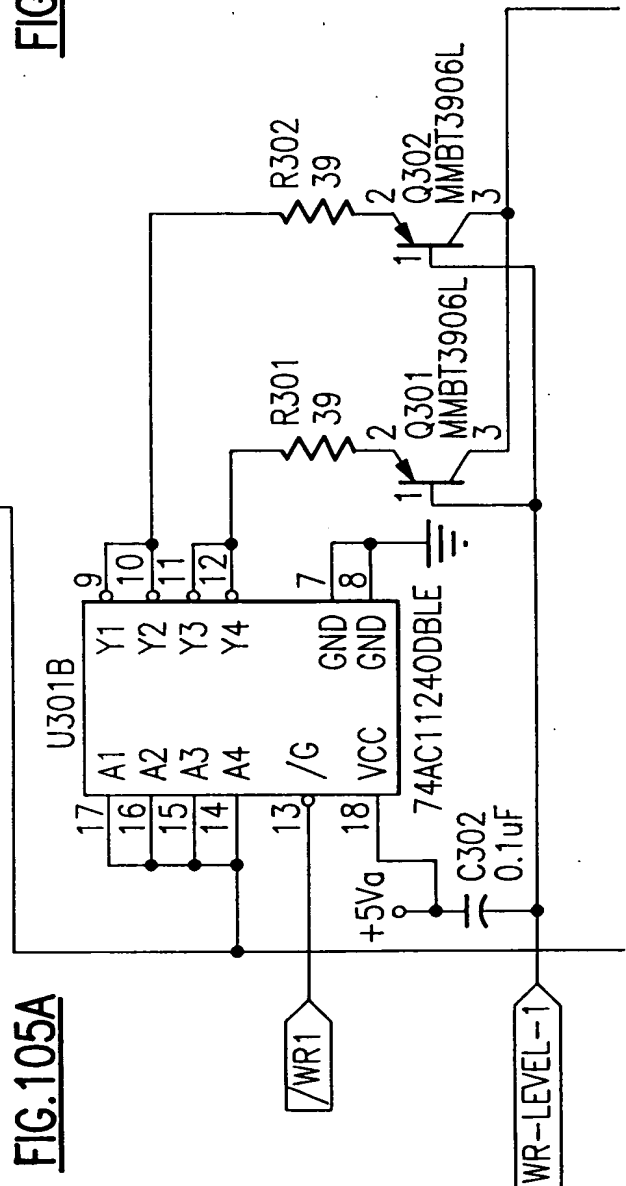


FIG. 105

FIG. 105A



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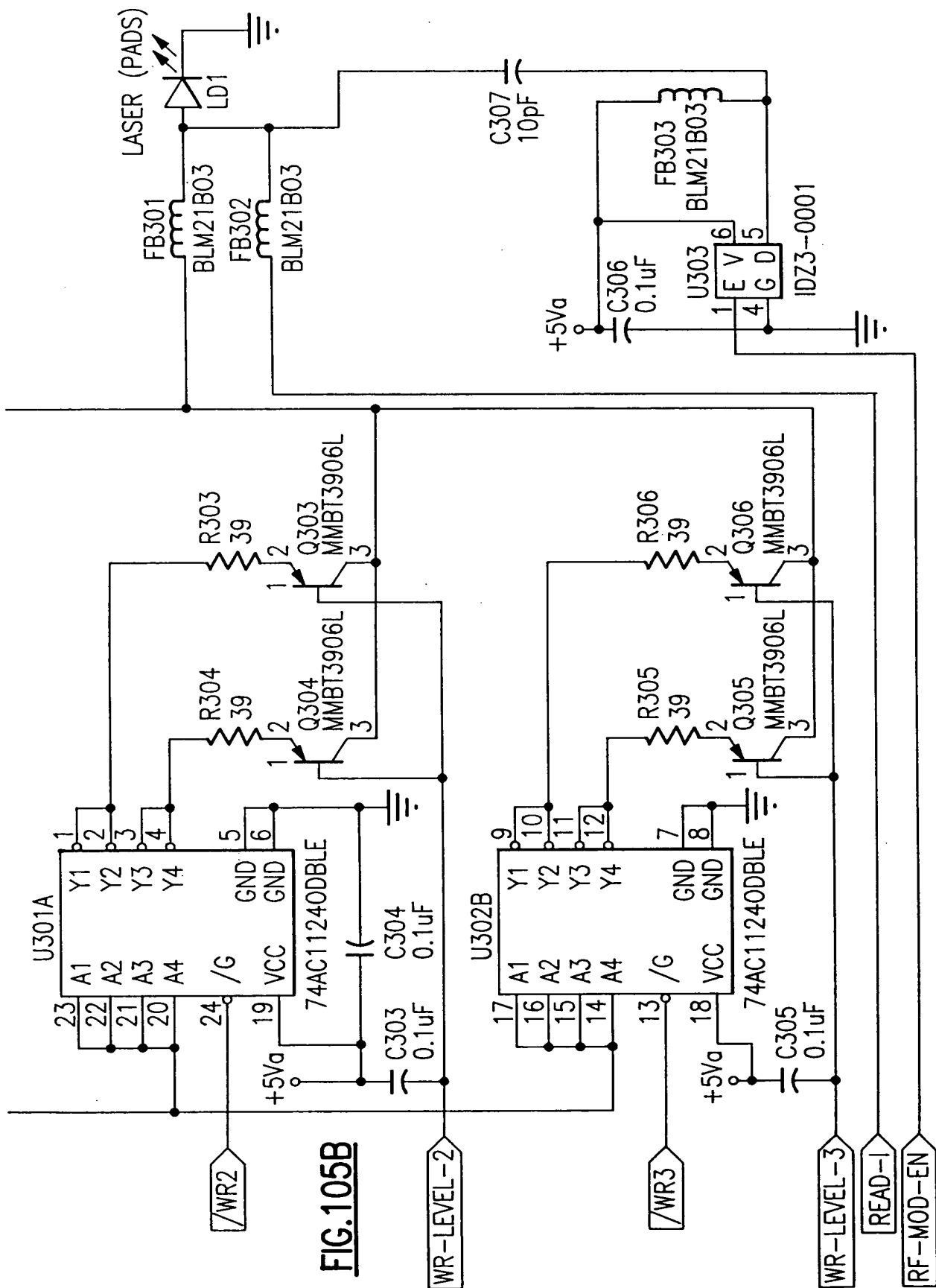


FIG. 105B

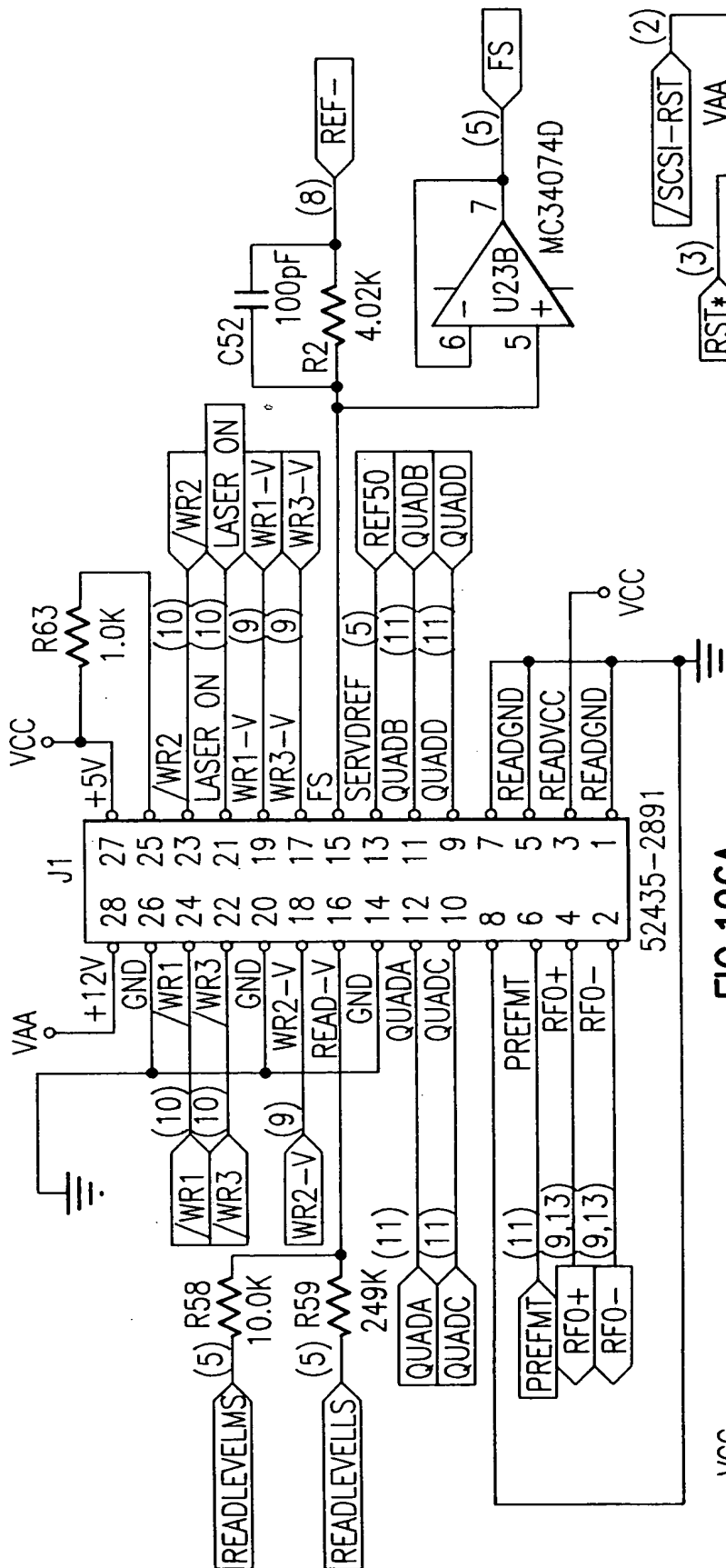


FIG. 106A

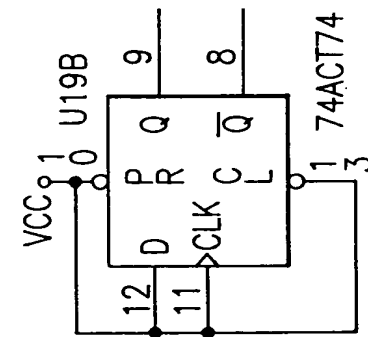


FIG. 106C

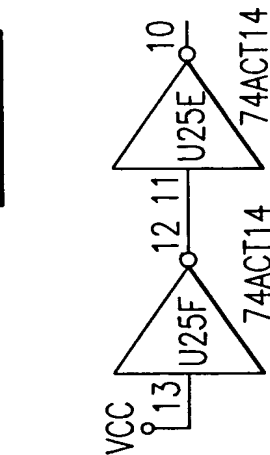


FIG. 106D

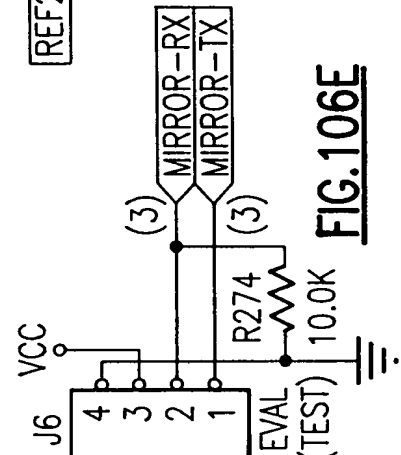


FIG. 106E

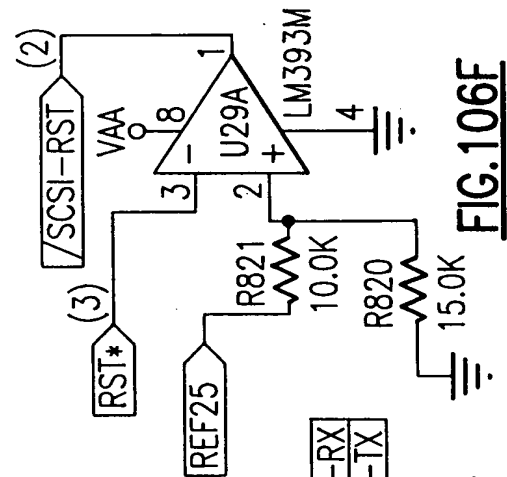


FIG. 106F

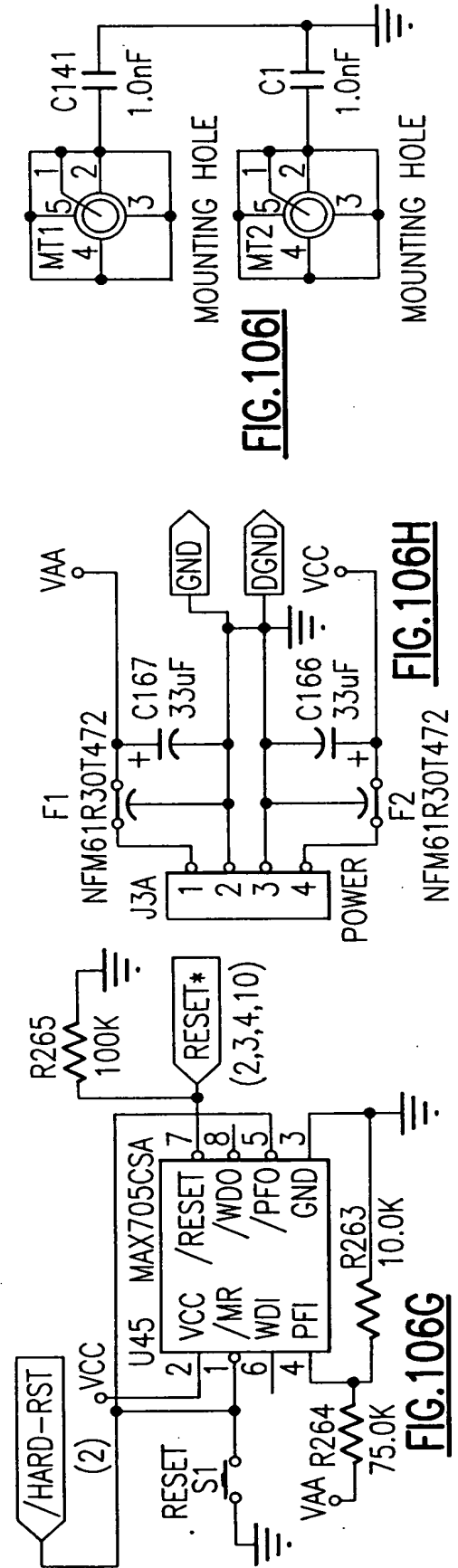
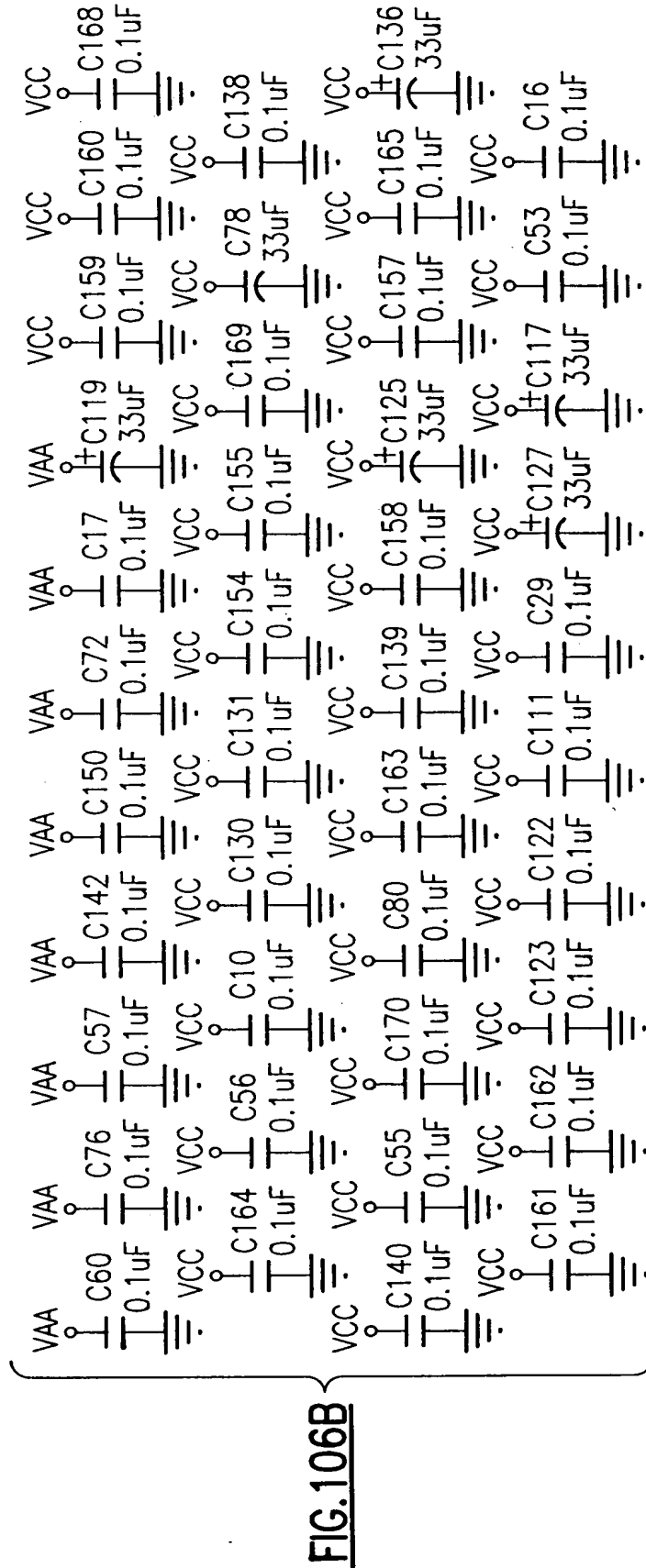


FIG. 106D

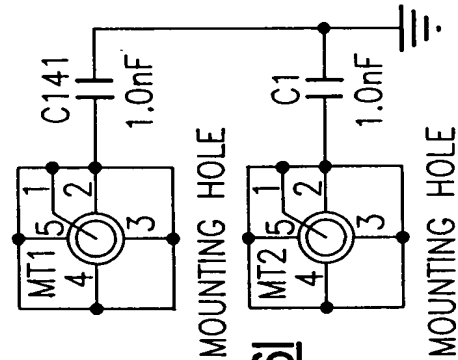
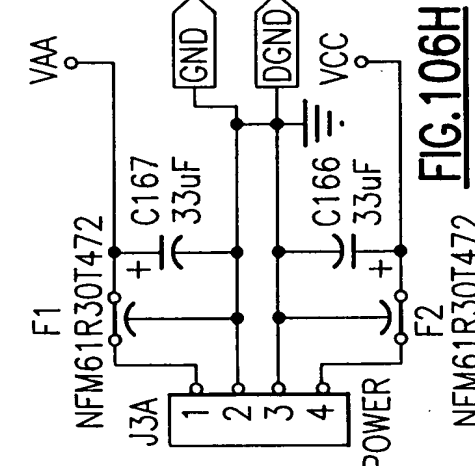
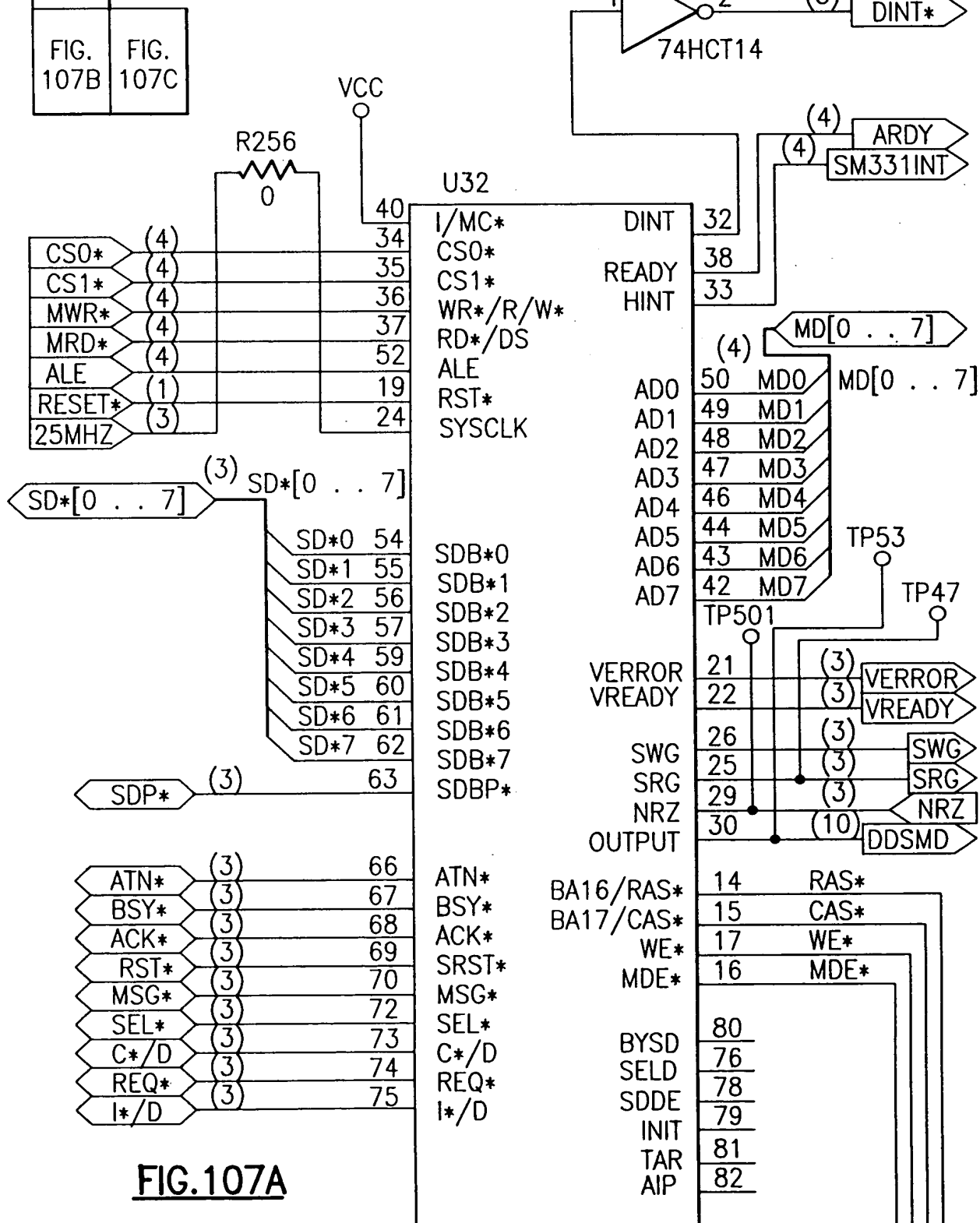


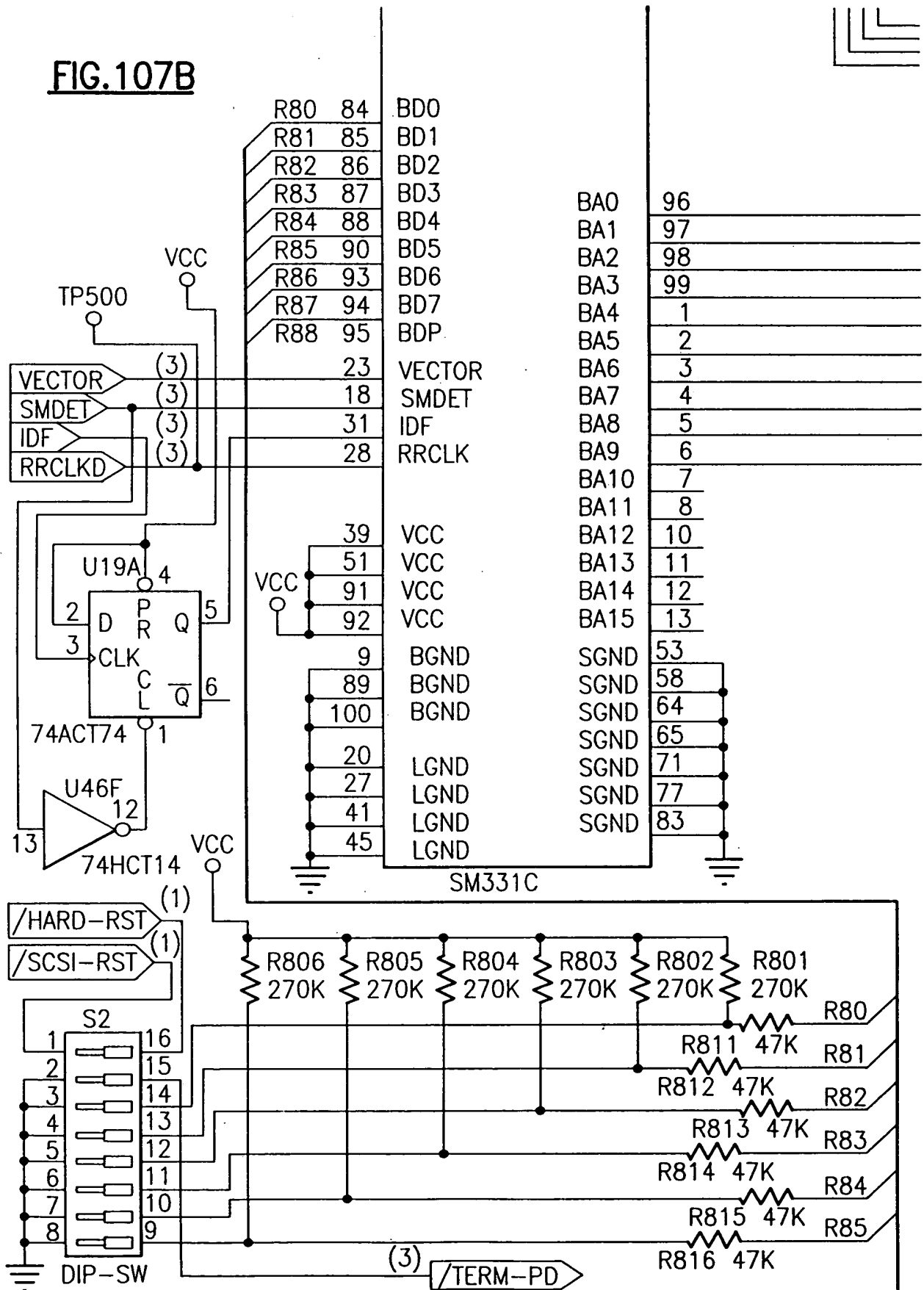
FIG. 106E





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FIG.107B



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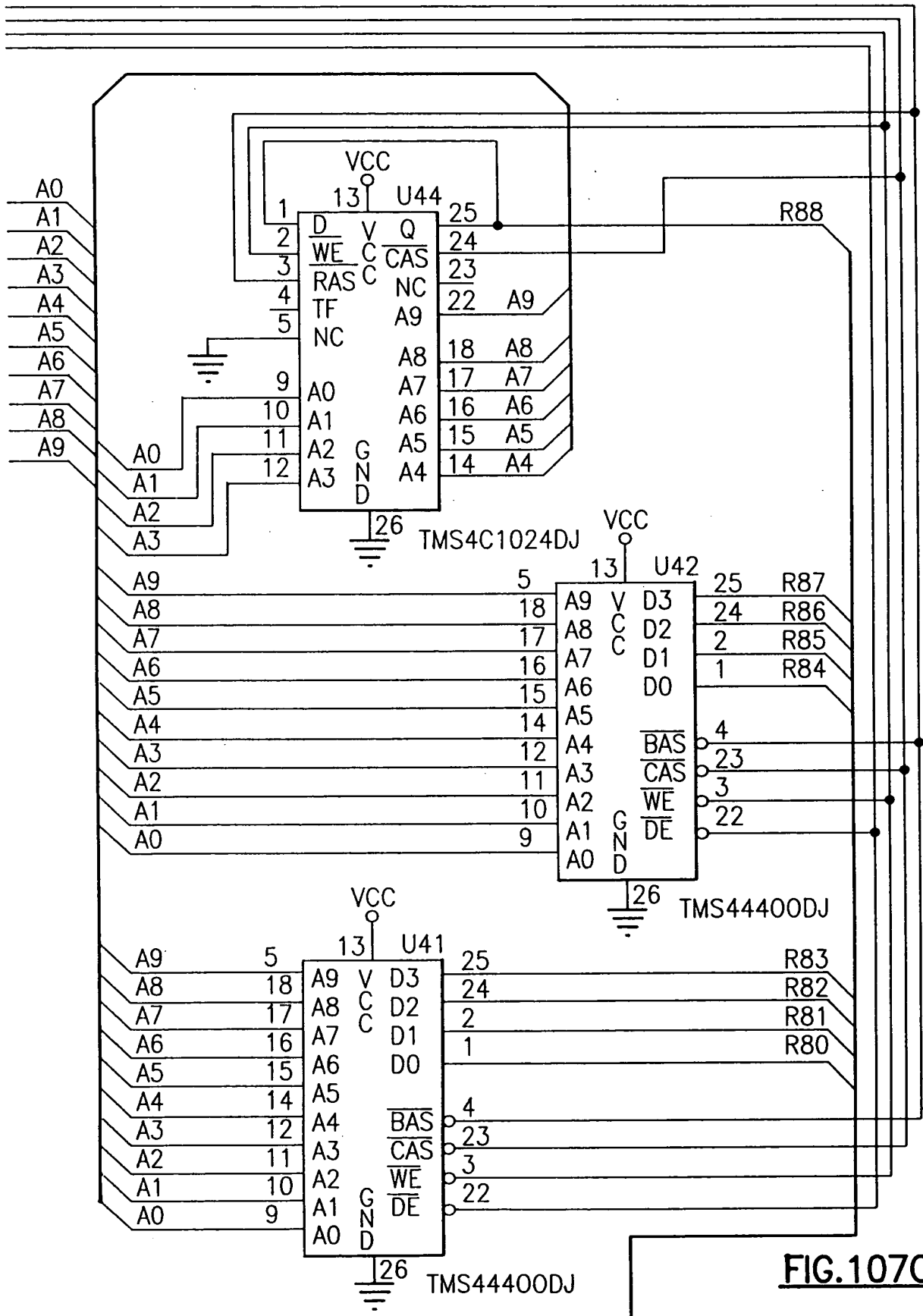
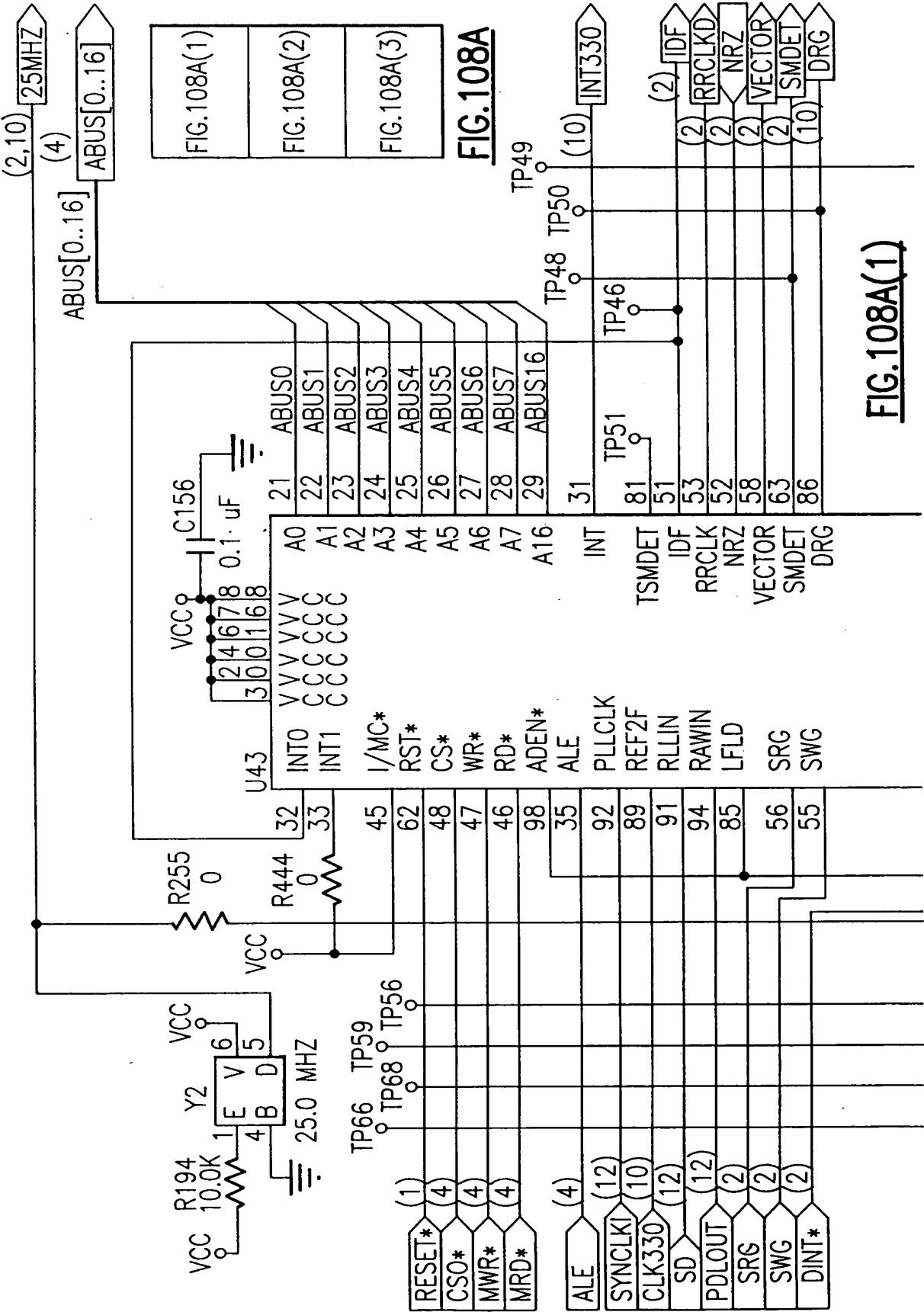


FIG. 107C



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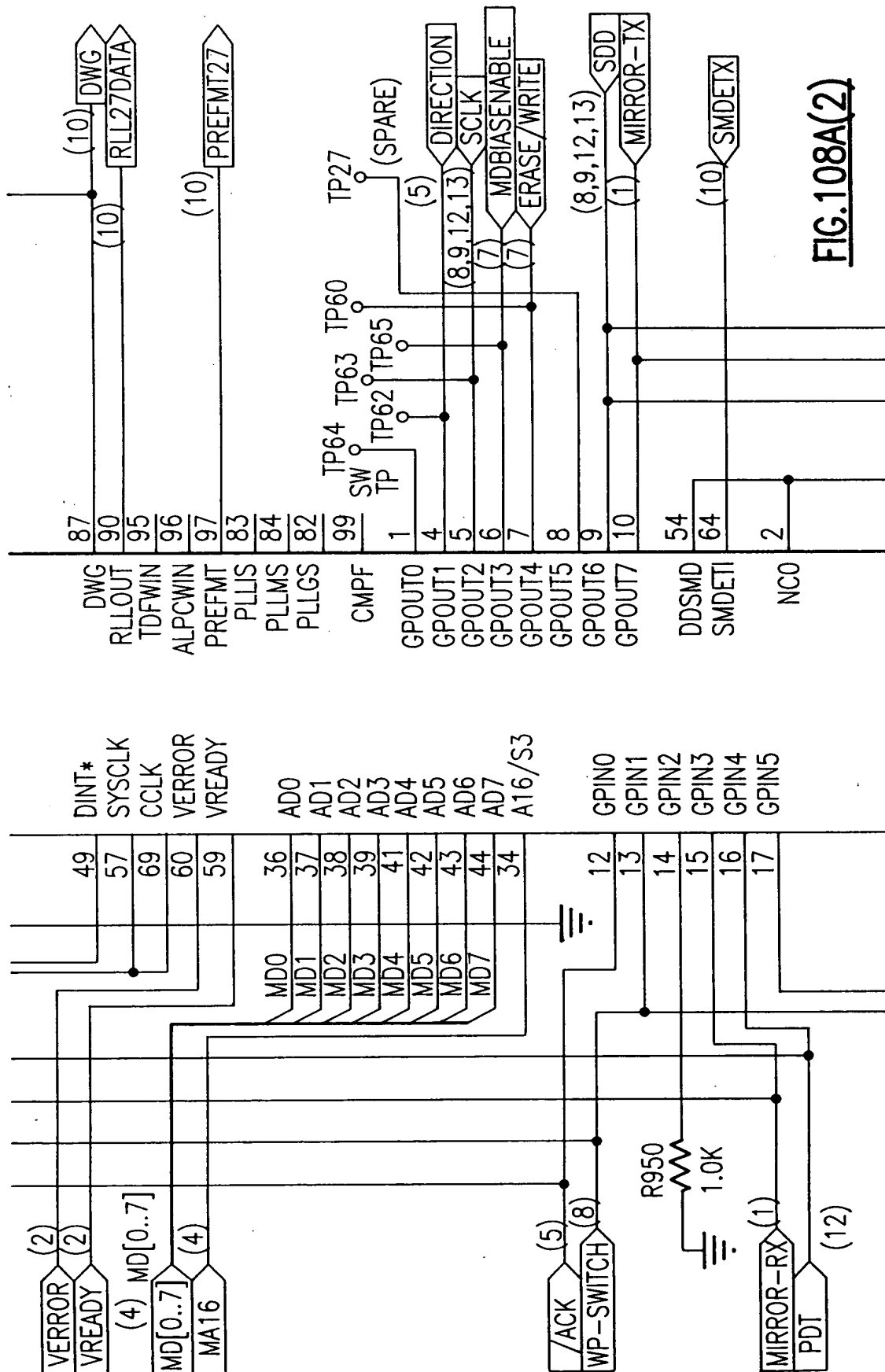


FIG. 108A(2)

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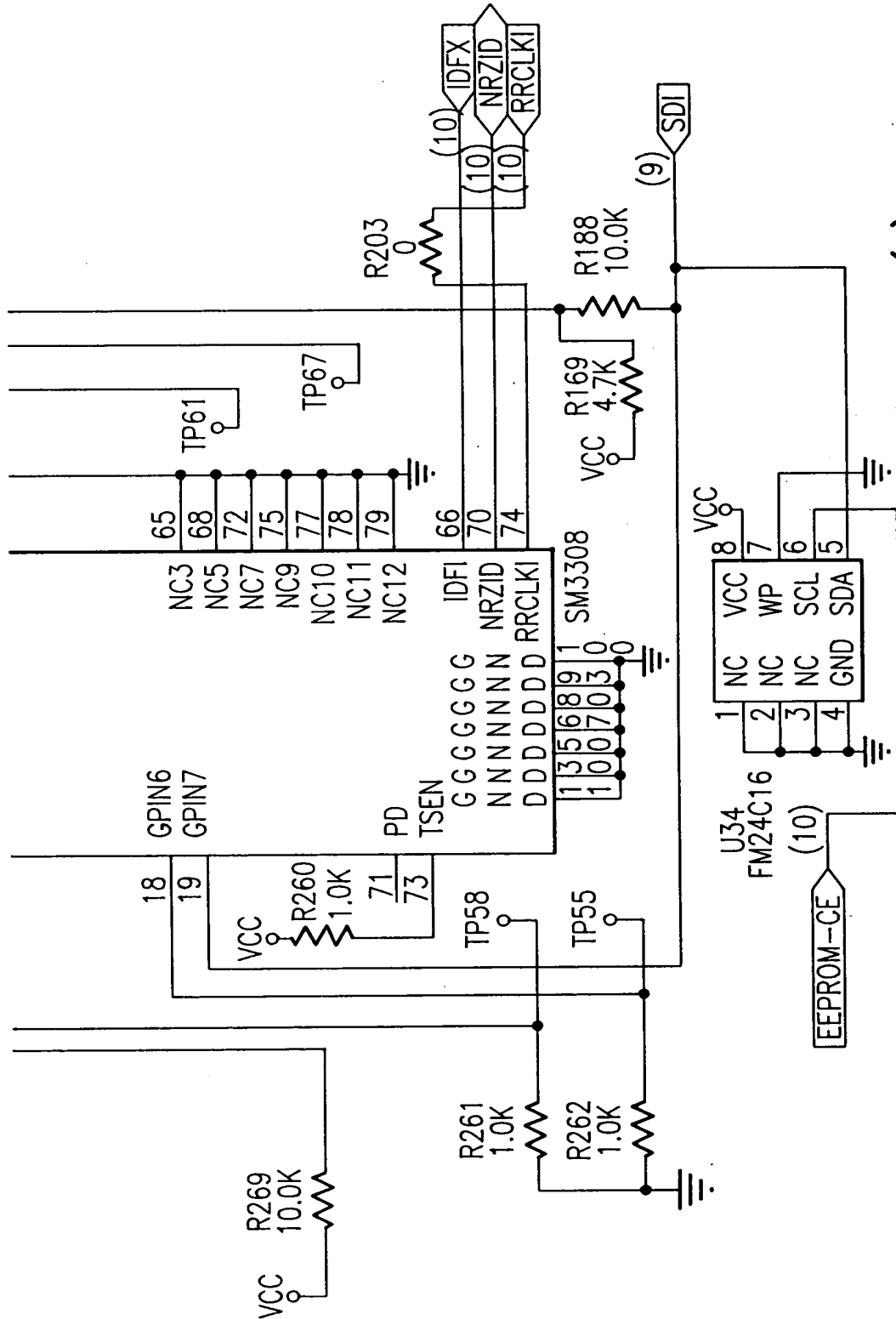


FIG. 108A(3)

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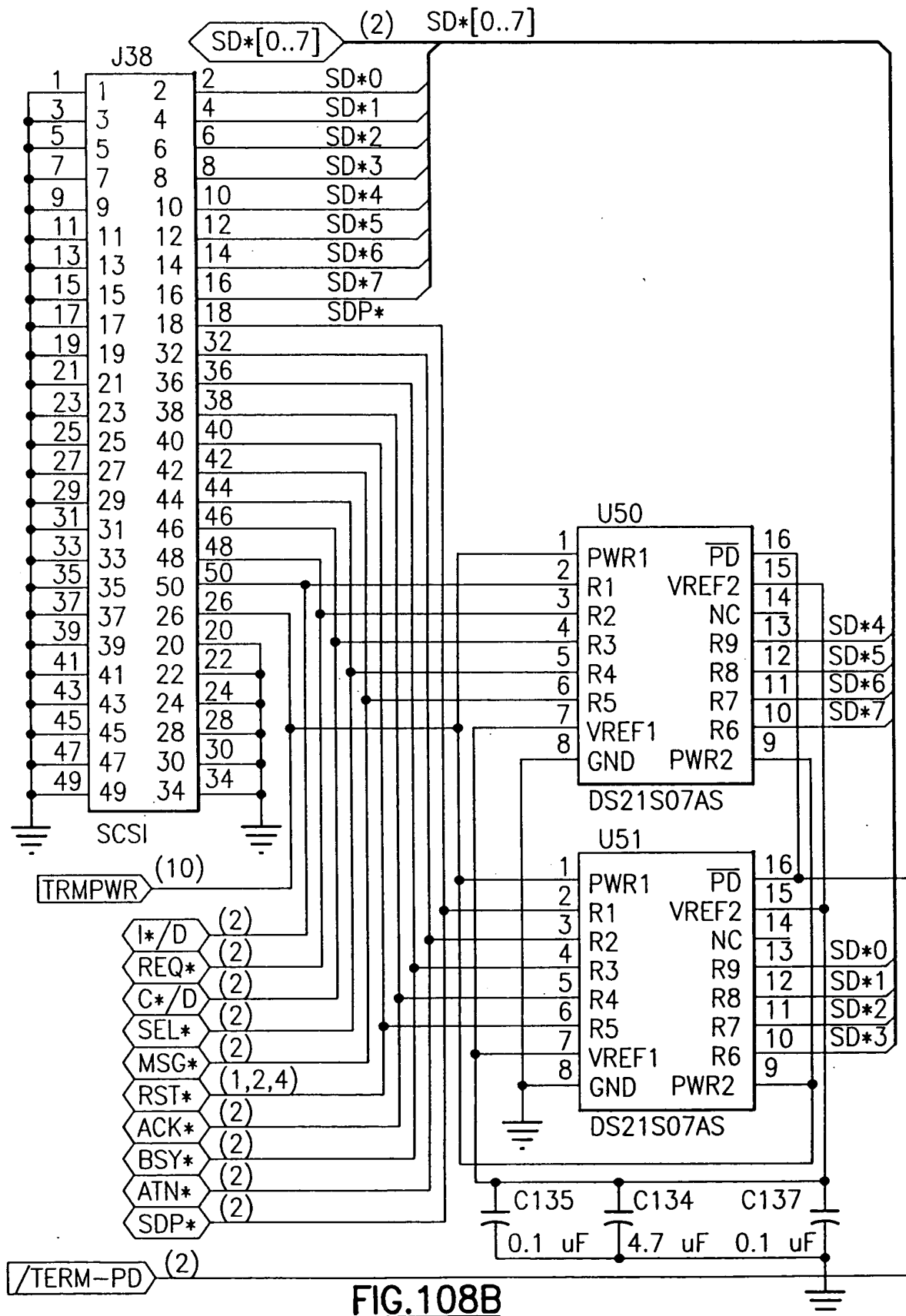


FIG.108B



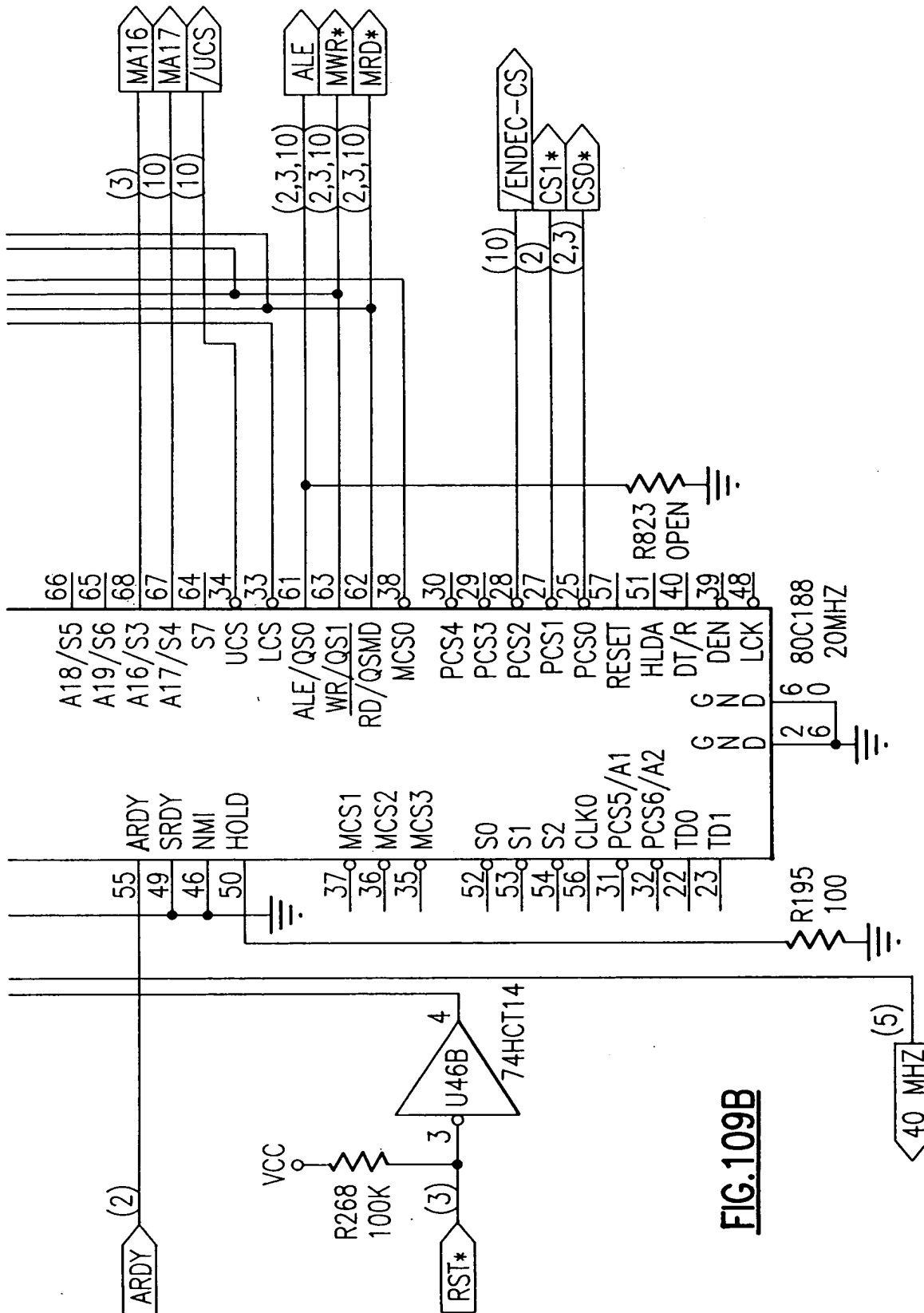


FIG.109B

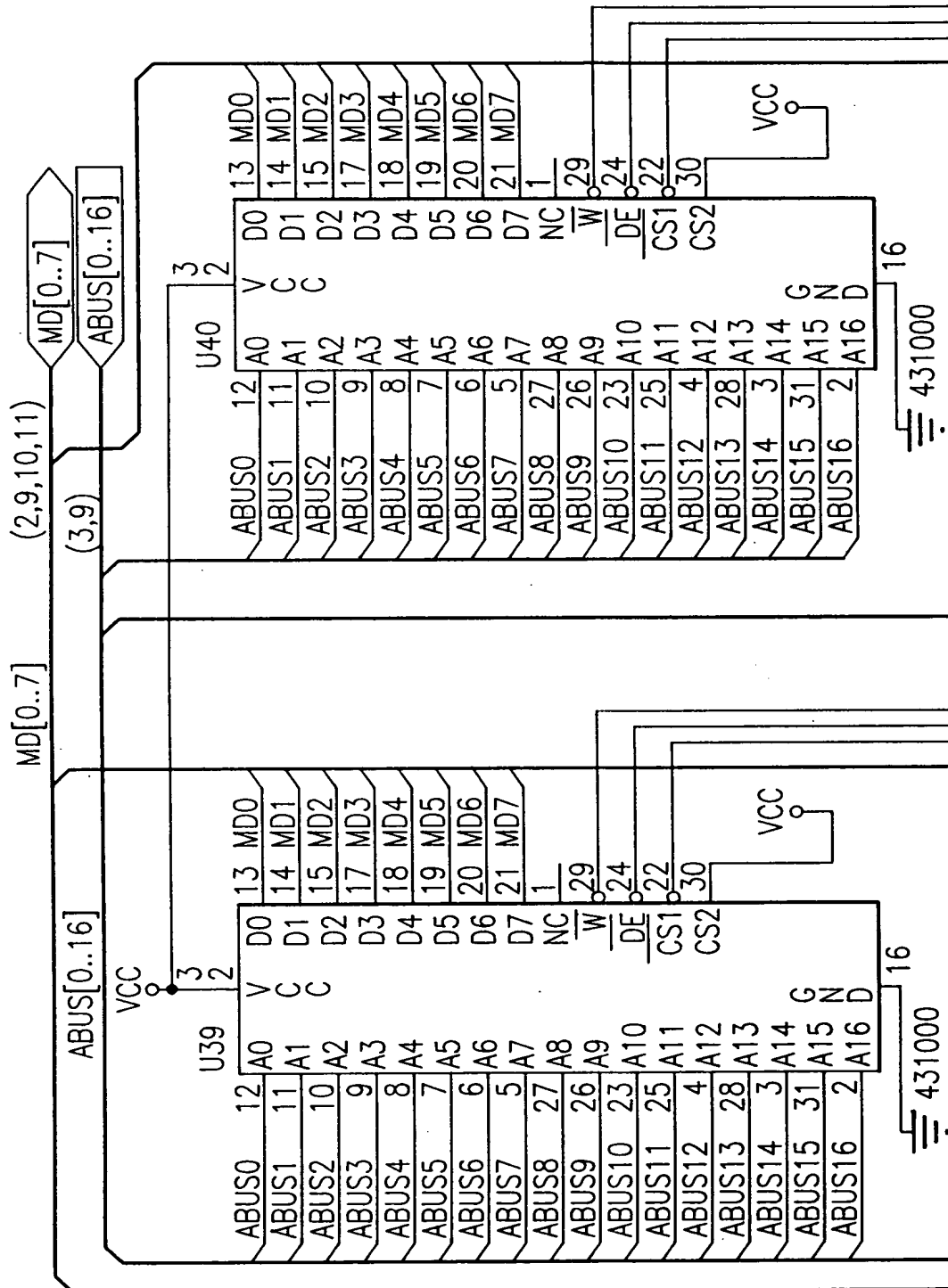


FIG. 109C

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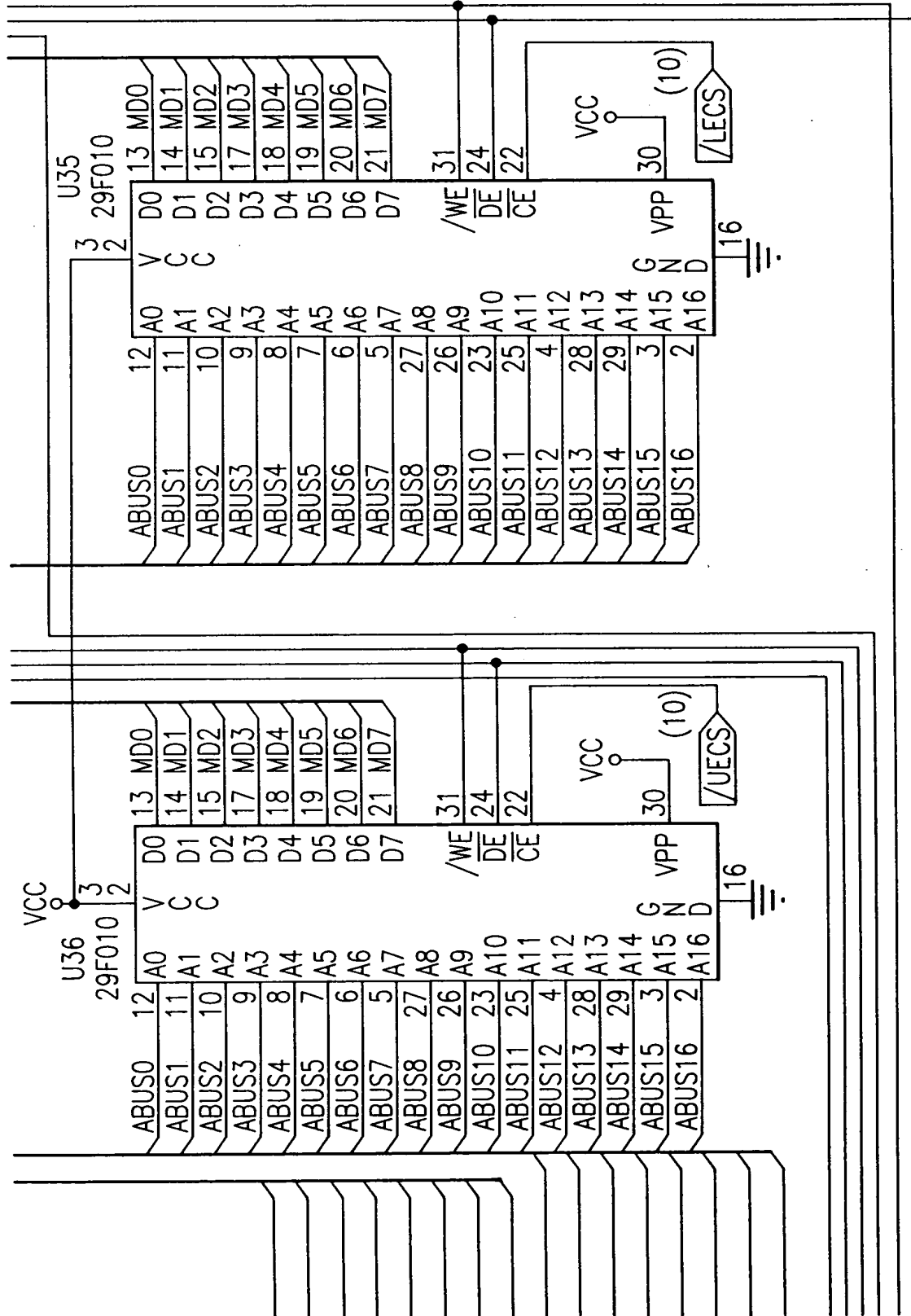


FIG.109D

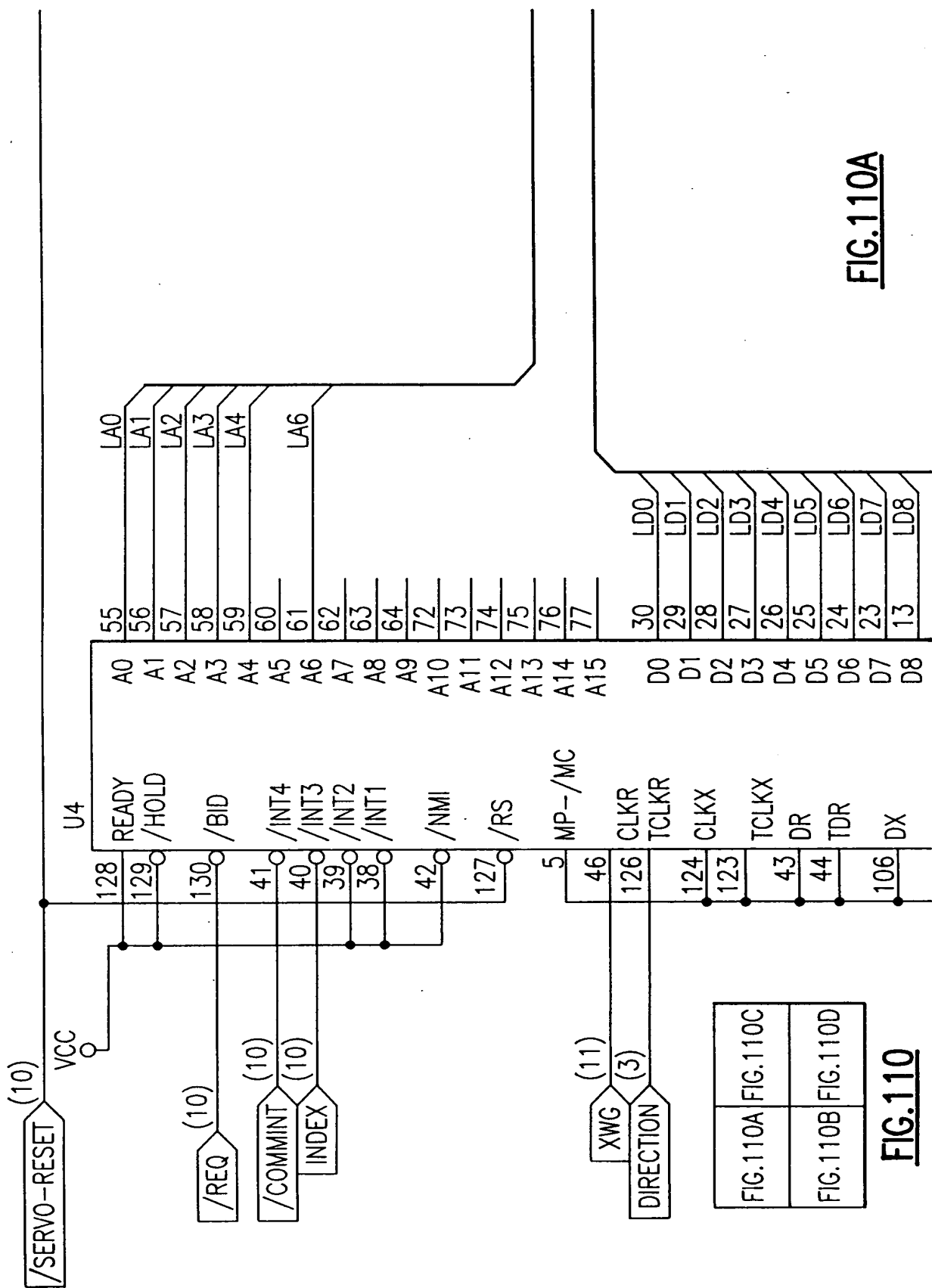


FIG. 110A

FIG. 110

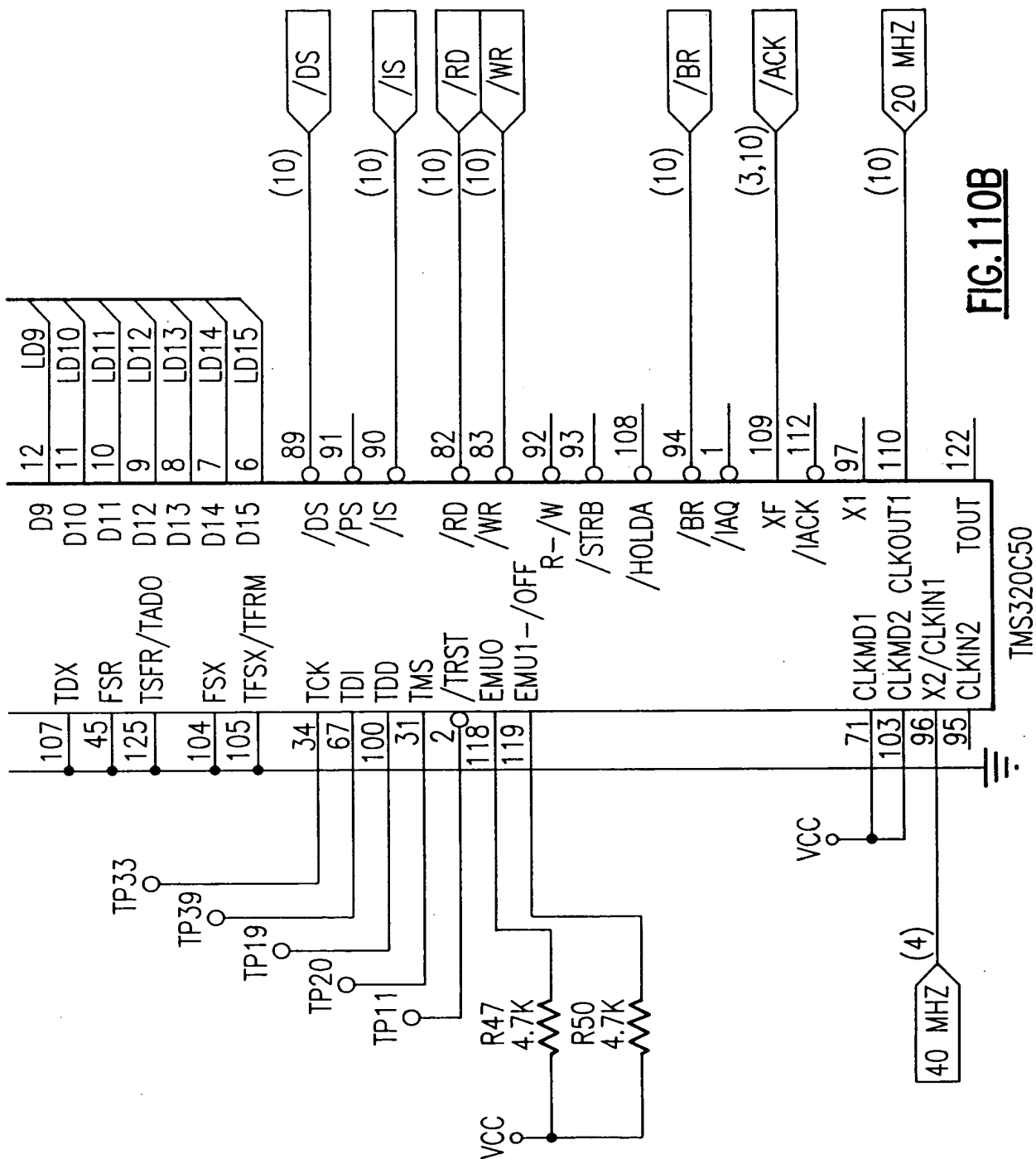
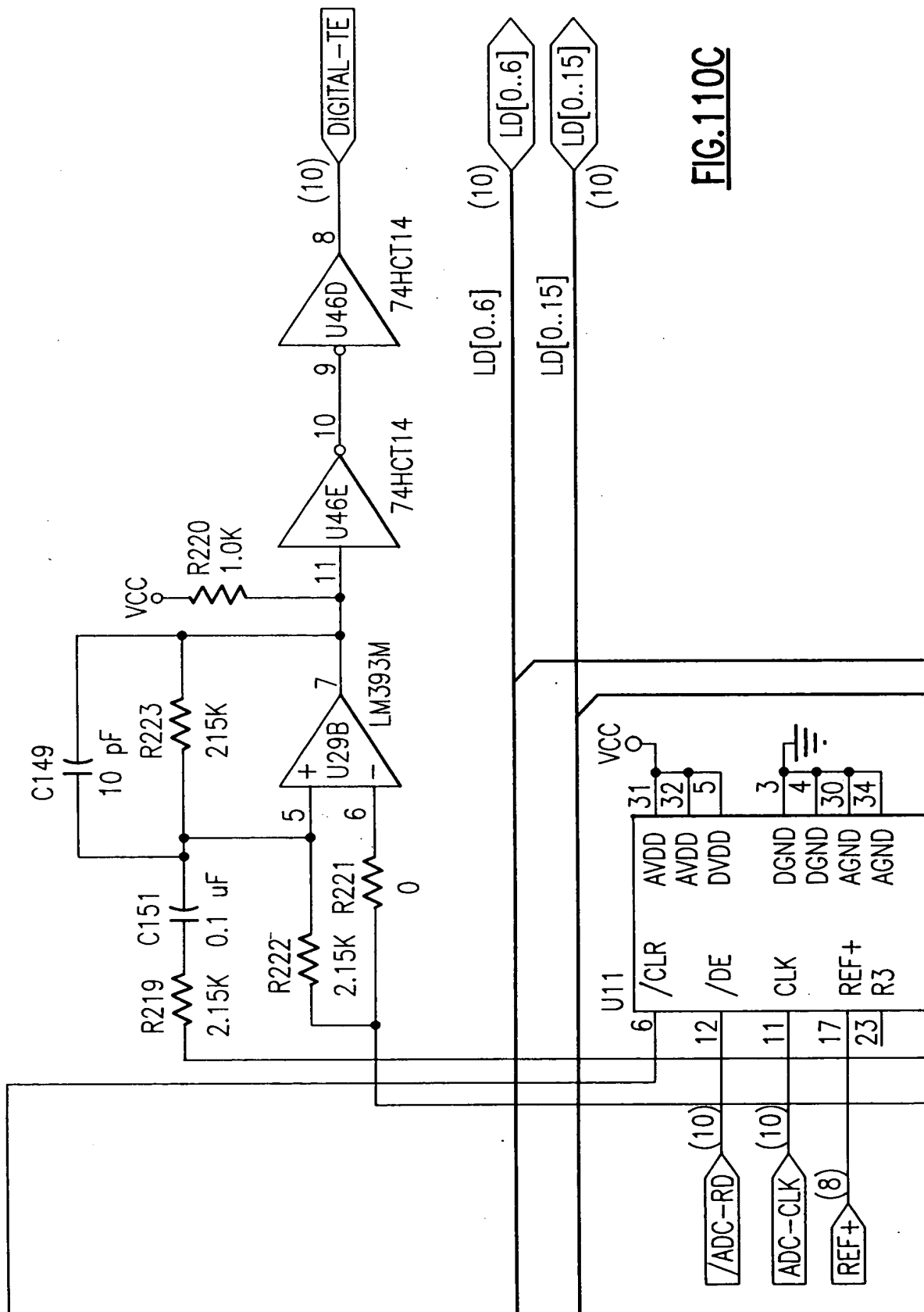


FIG. 110B

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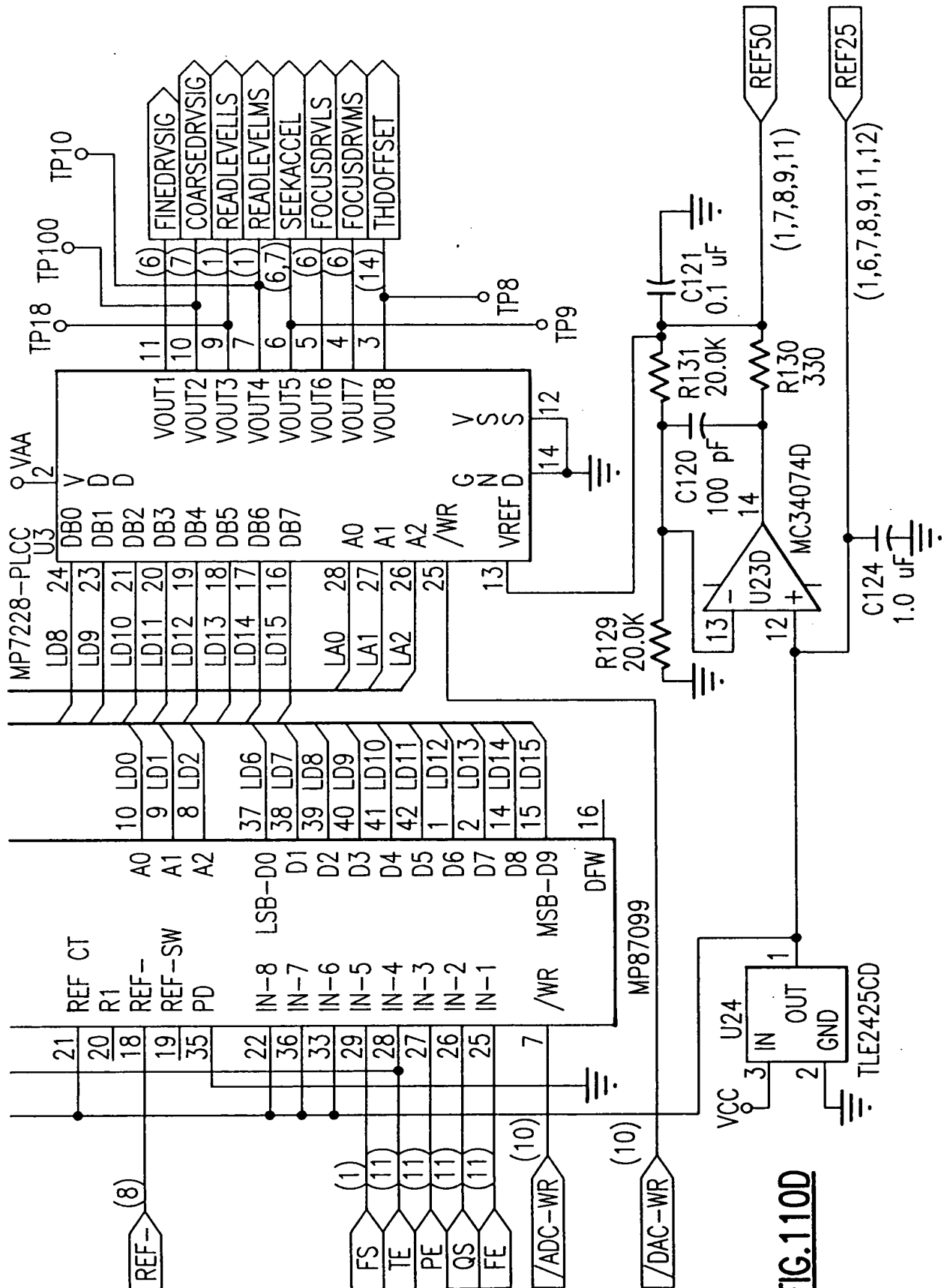
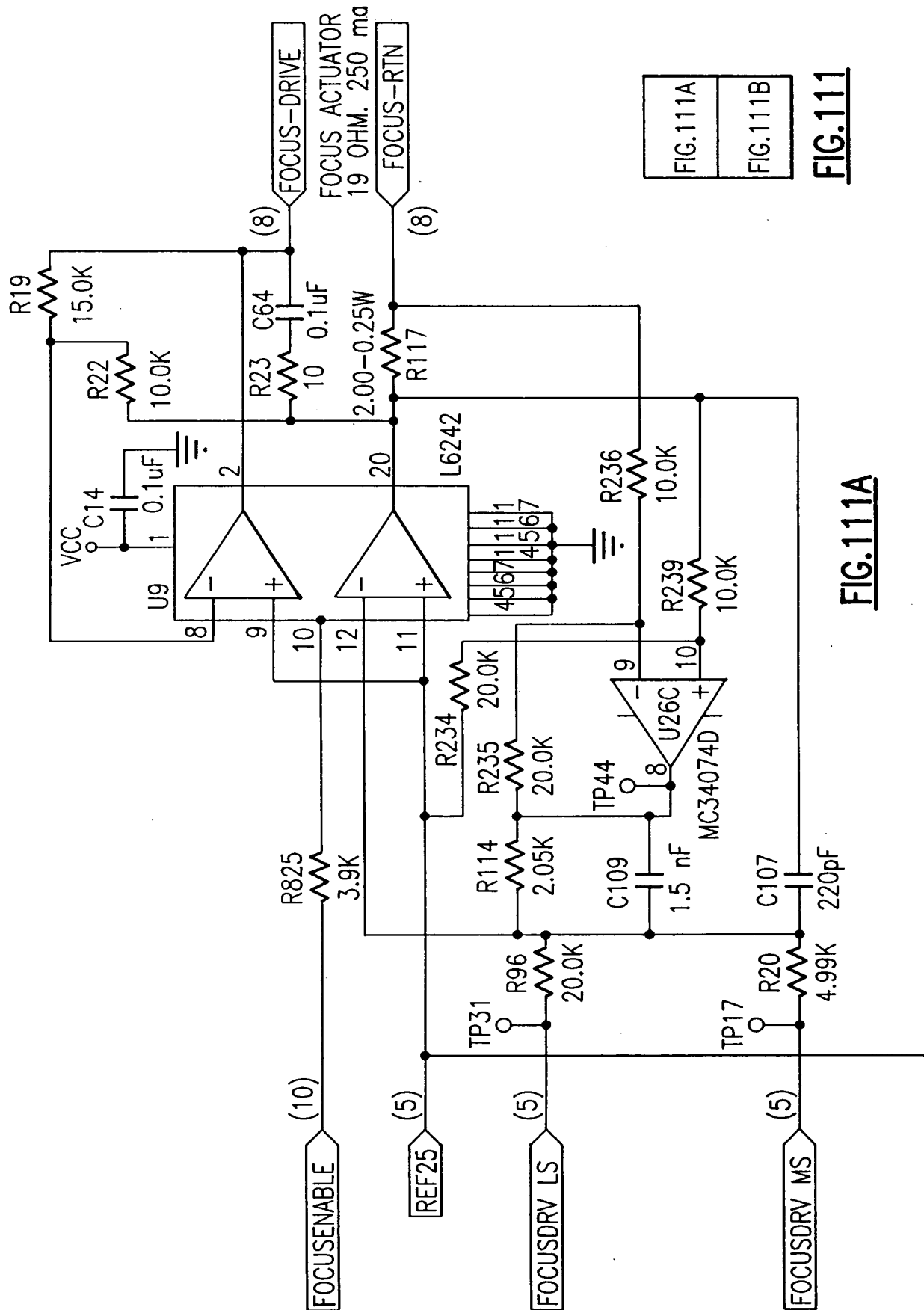
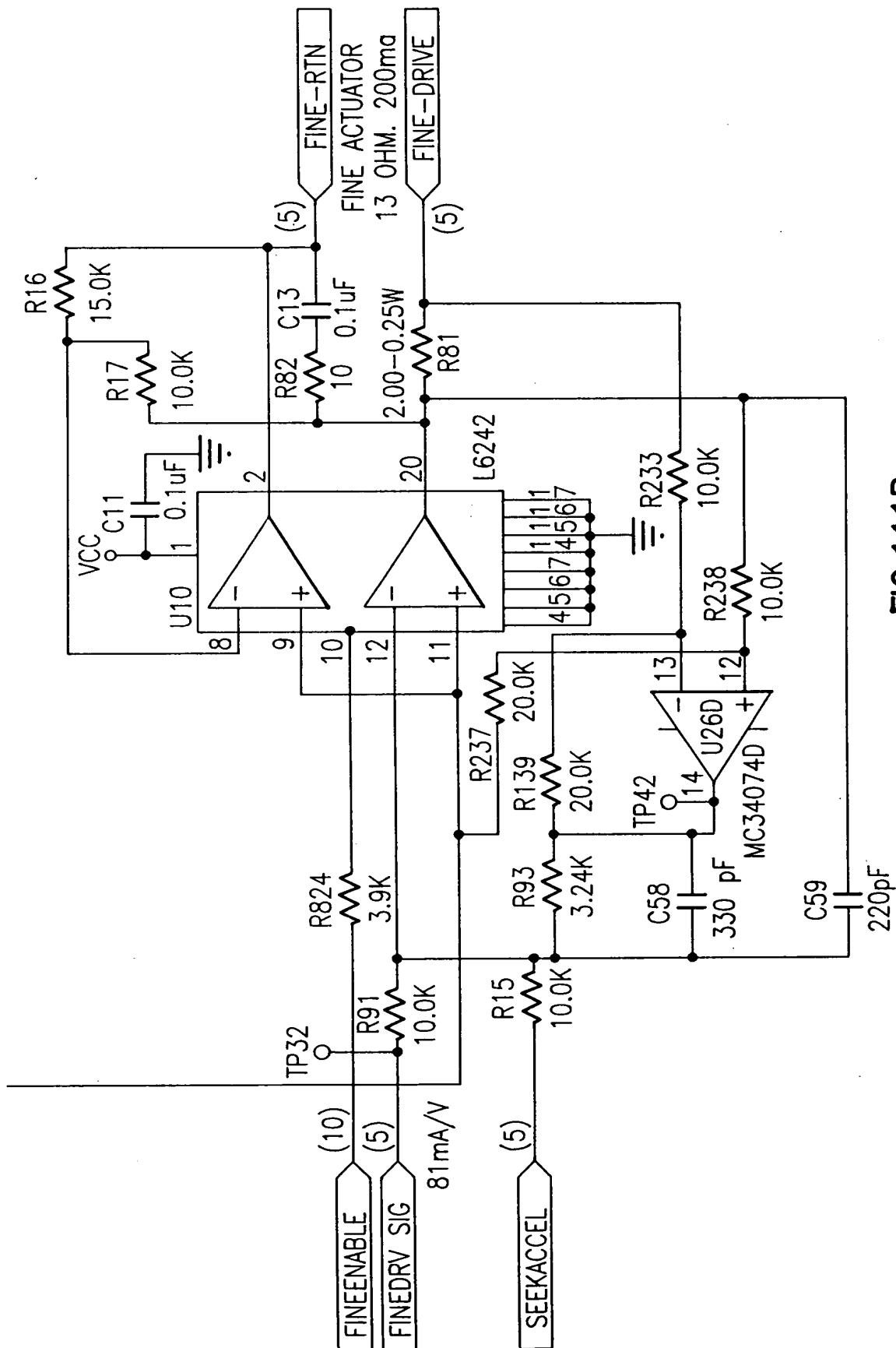


FIG. 110D





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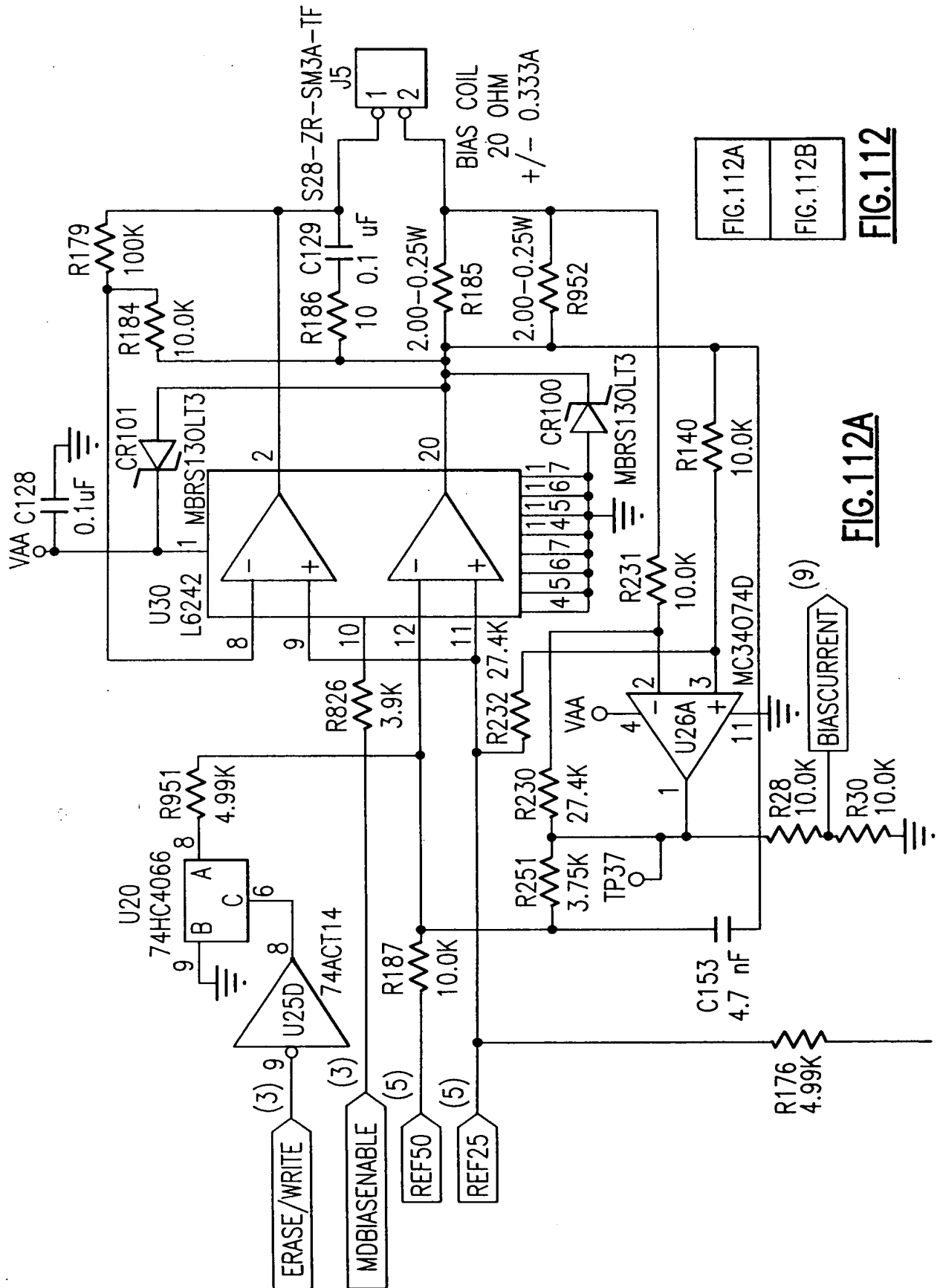


FIG. 112A

FIG. 112B

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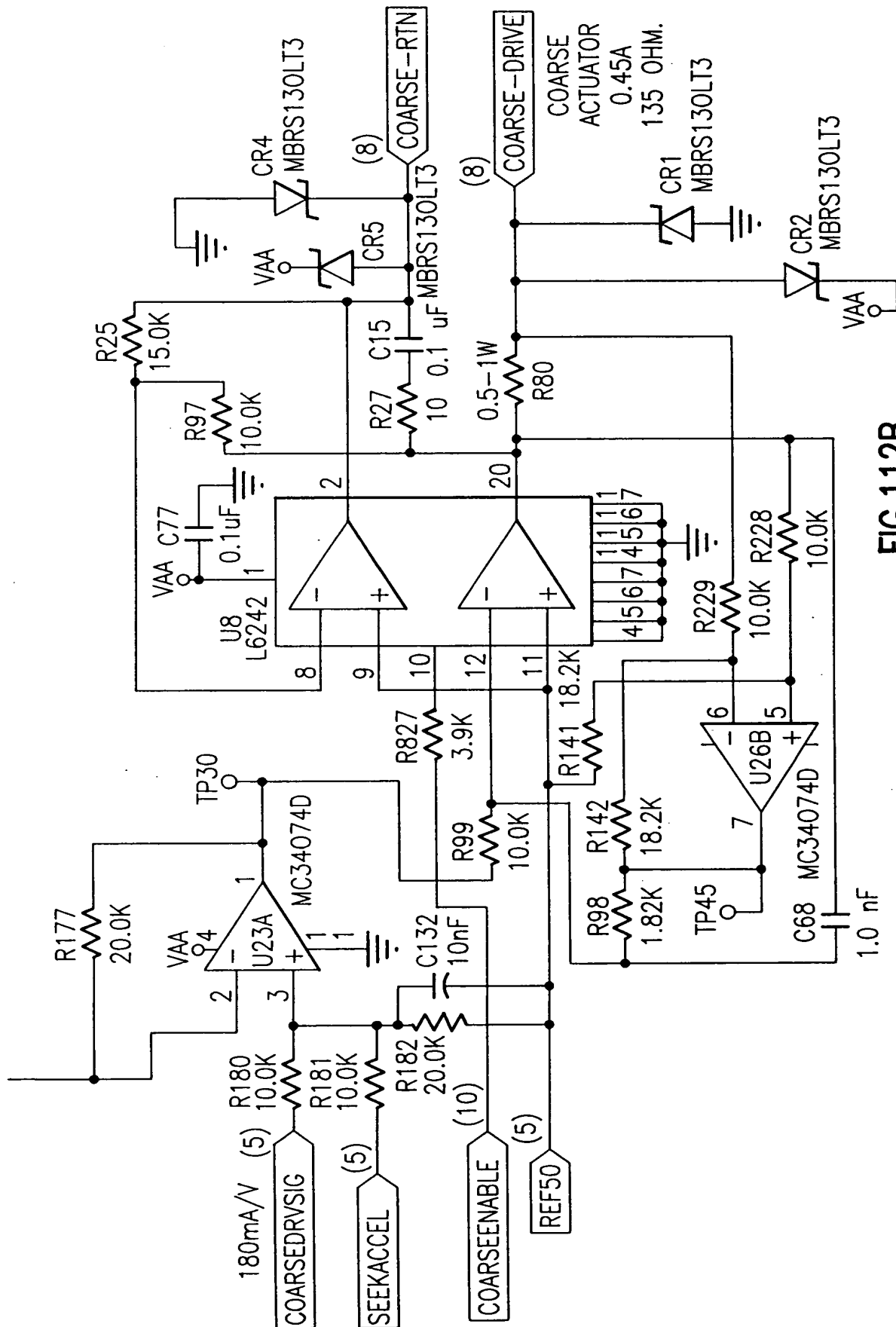
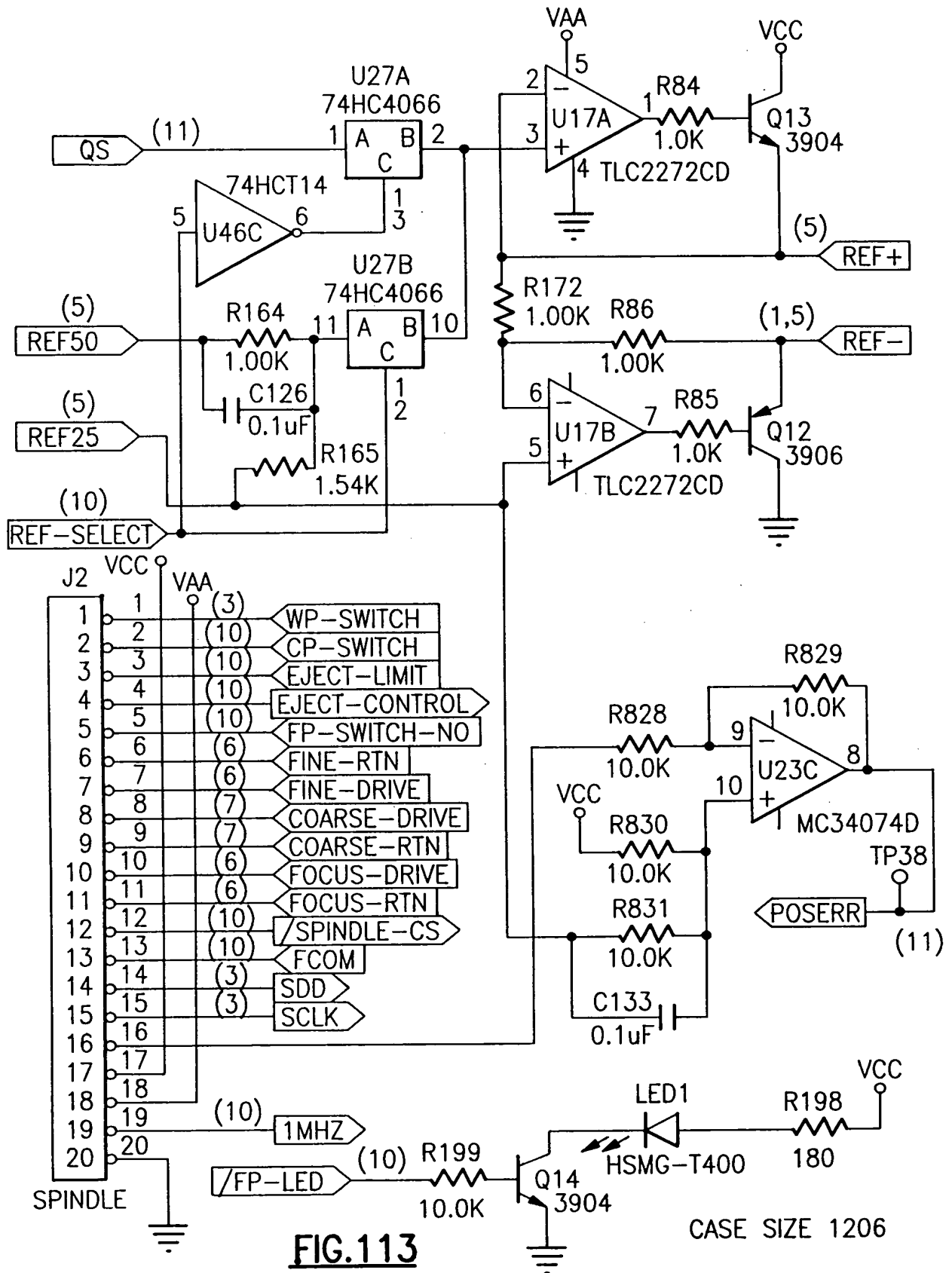
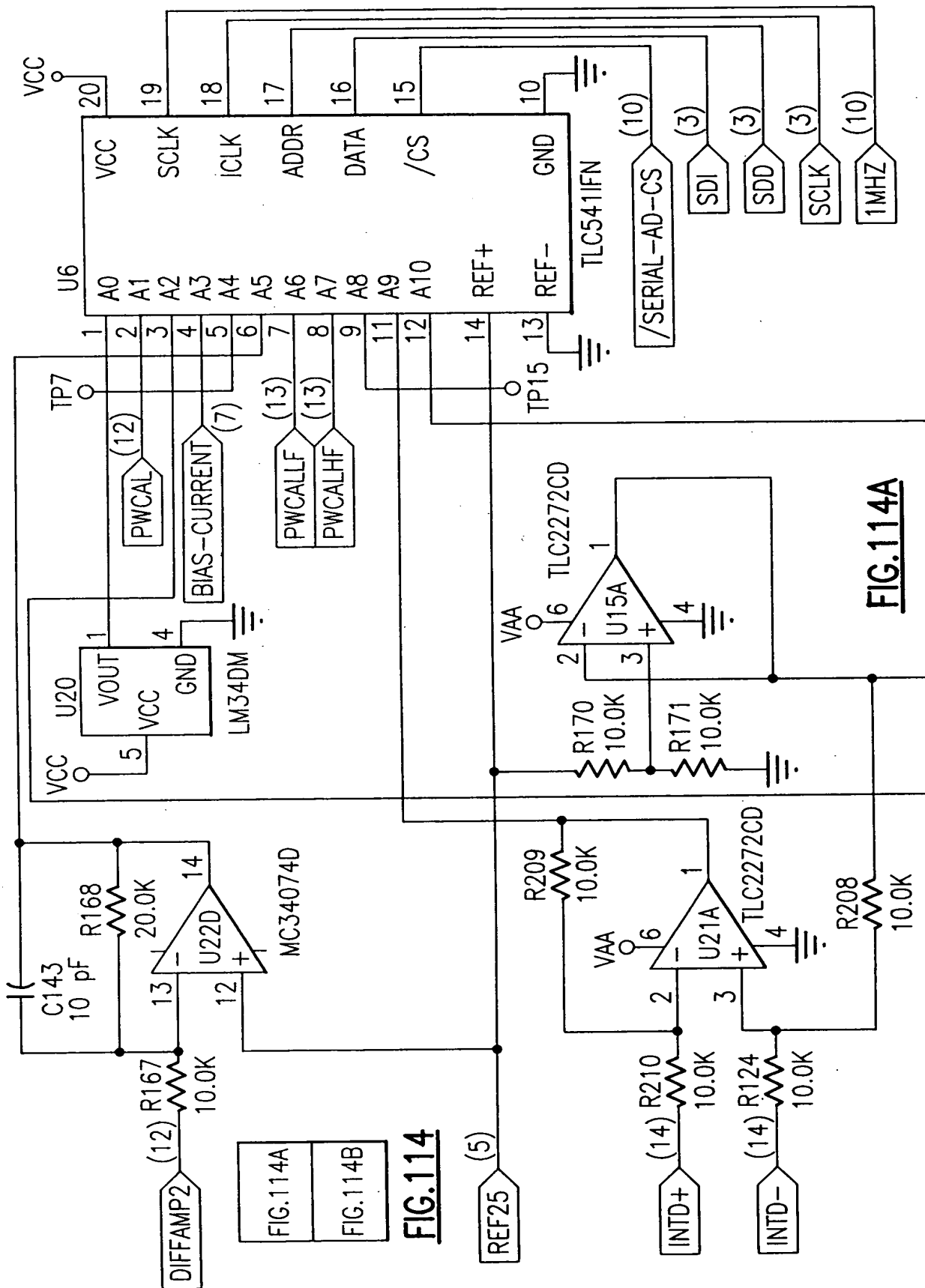


FIG.112B

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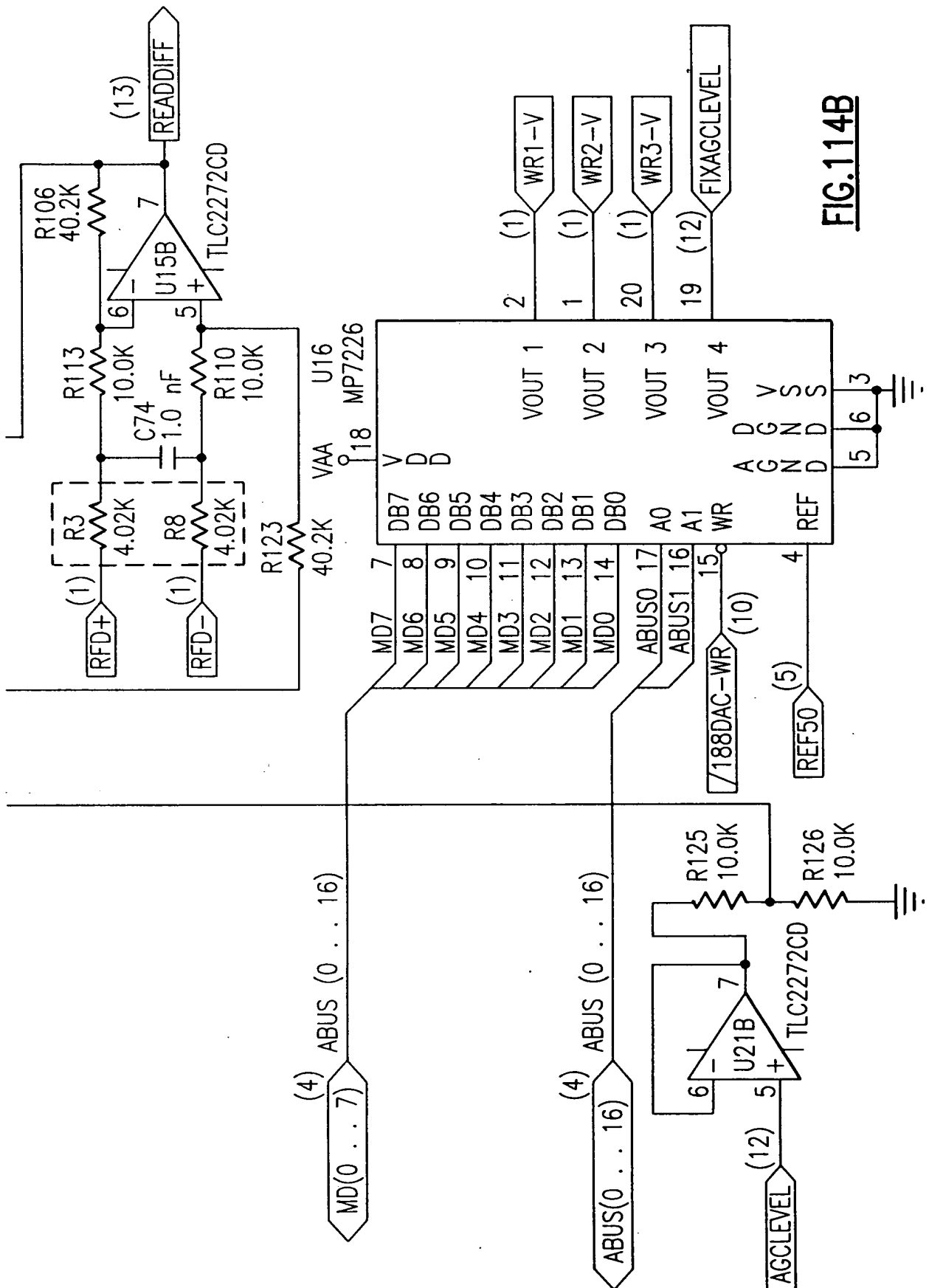


FIG. 114B

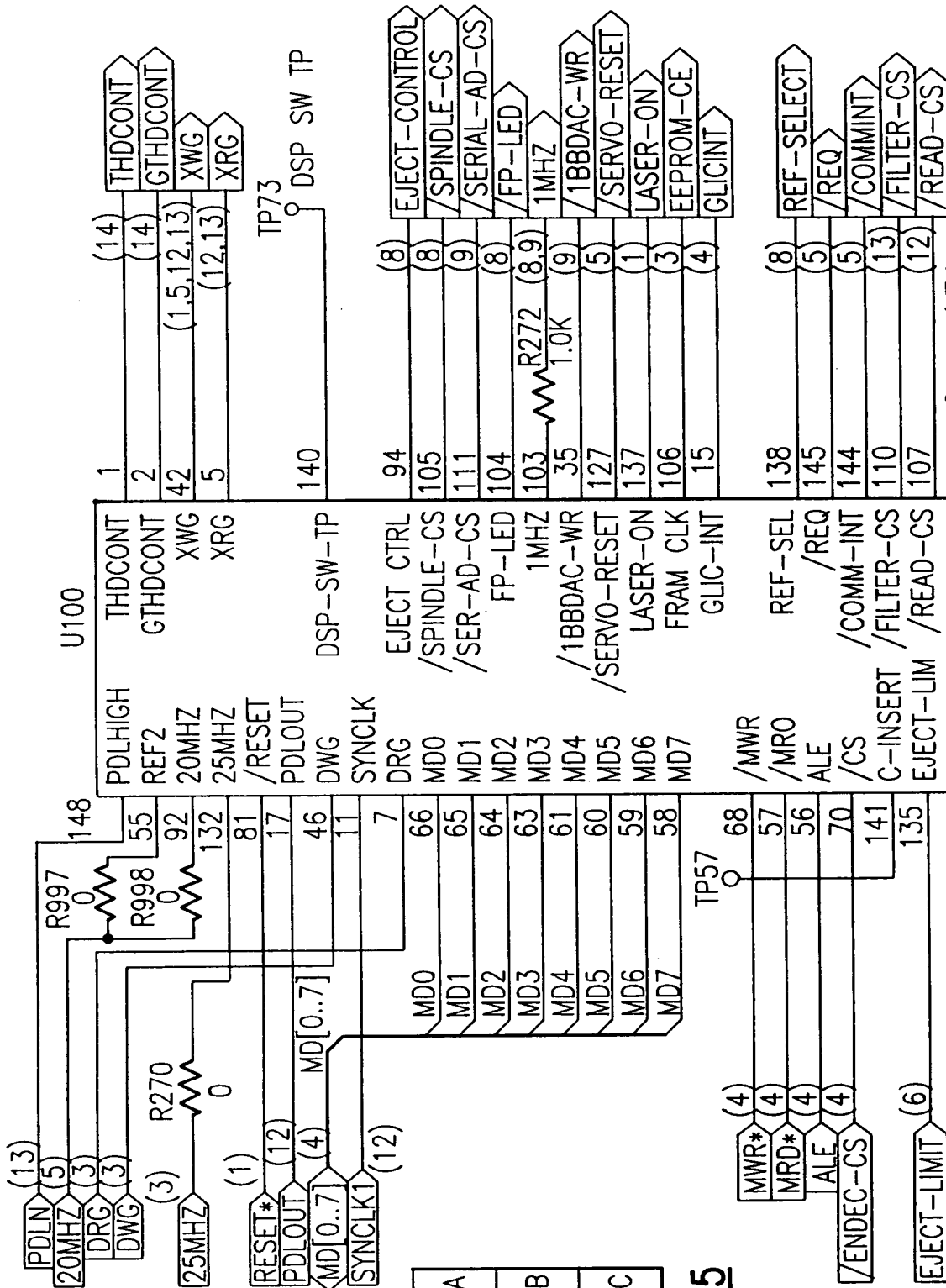
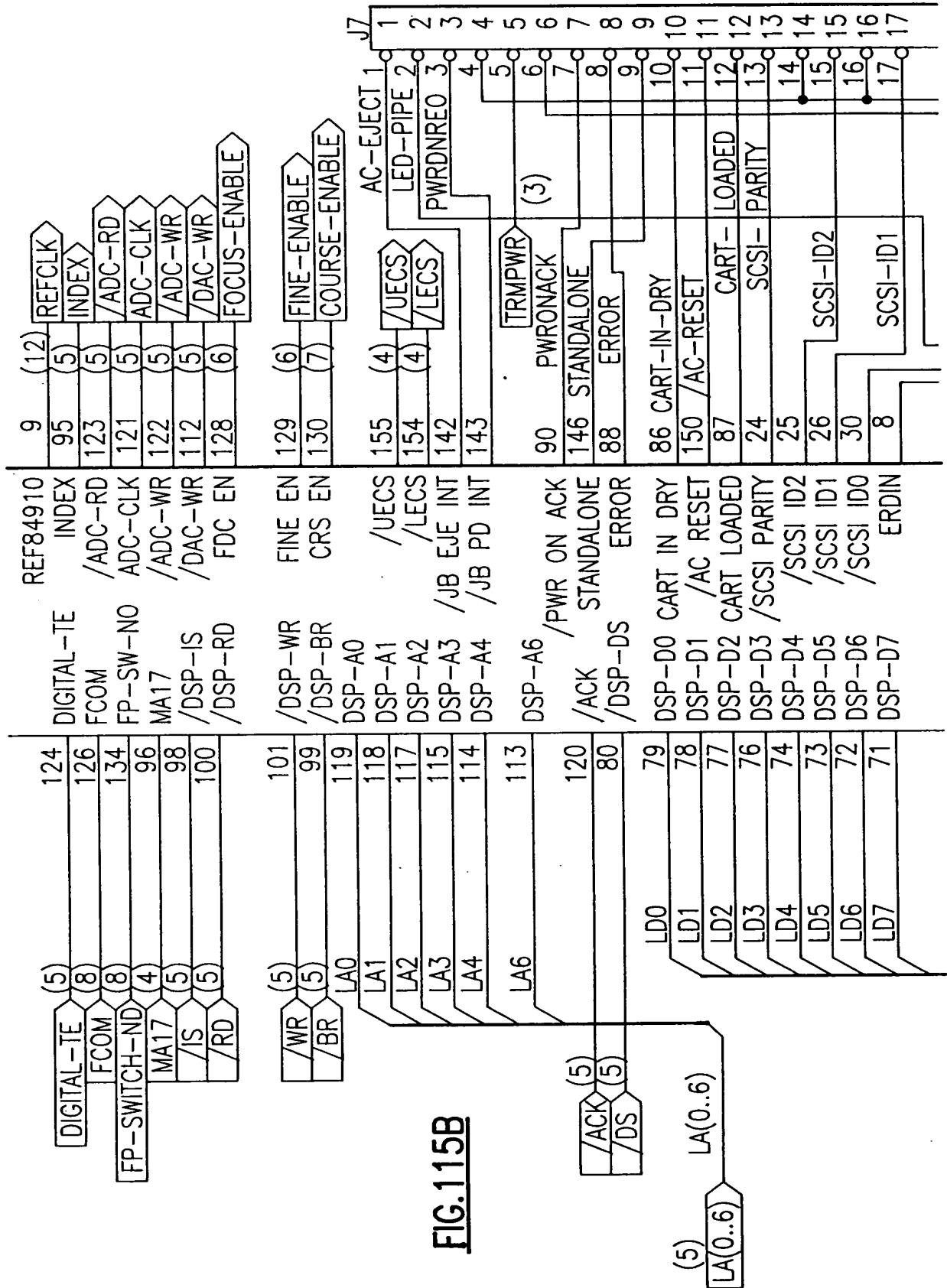
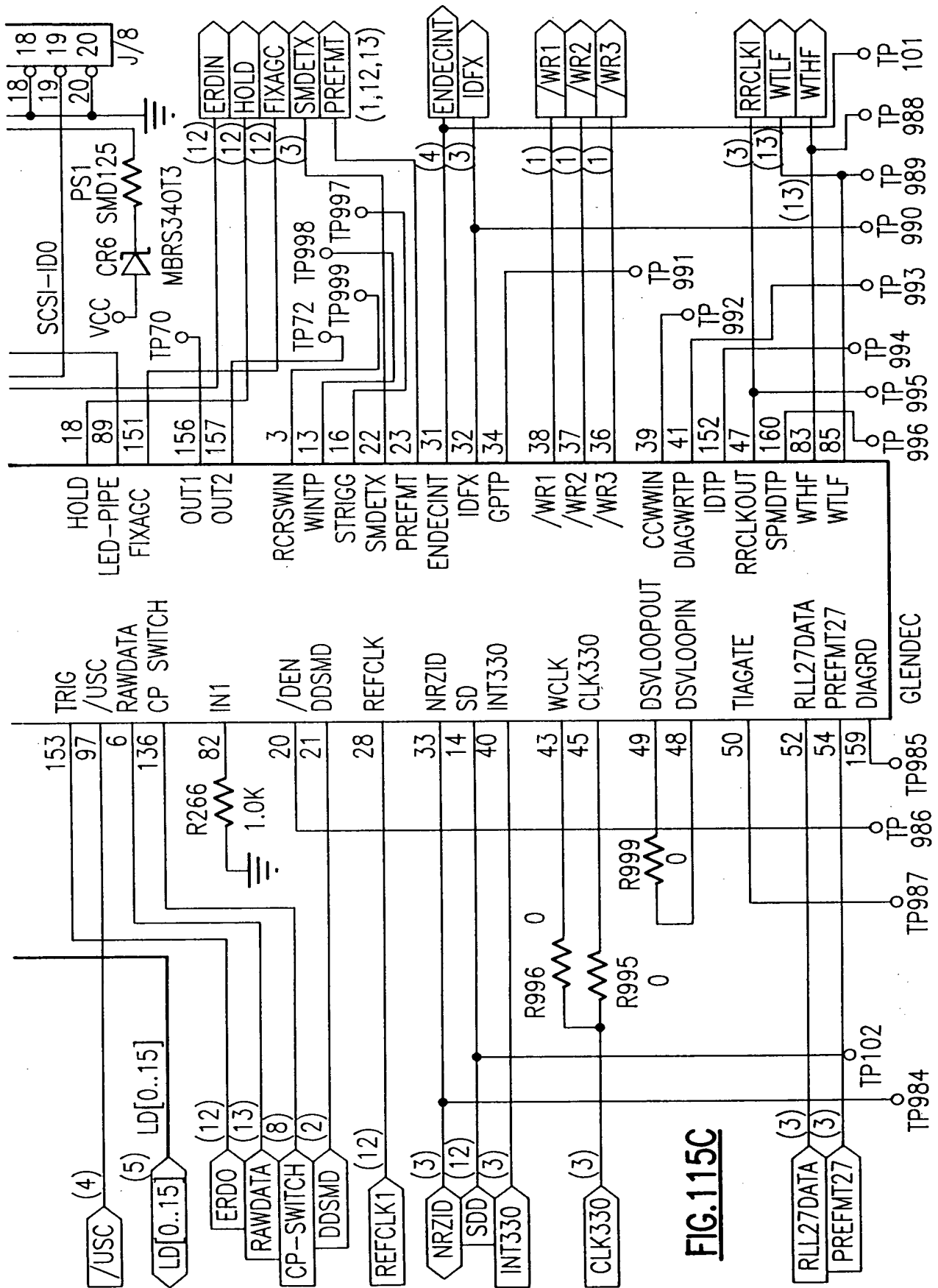


FIG. 115A

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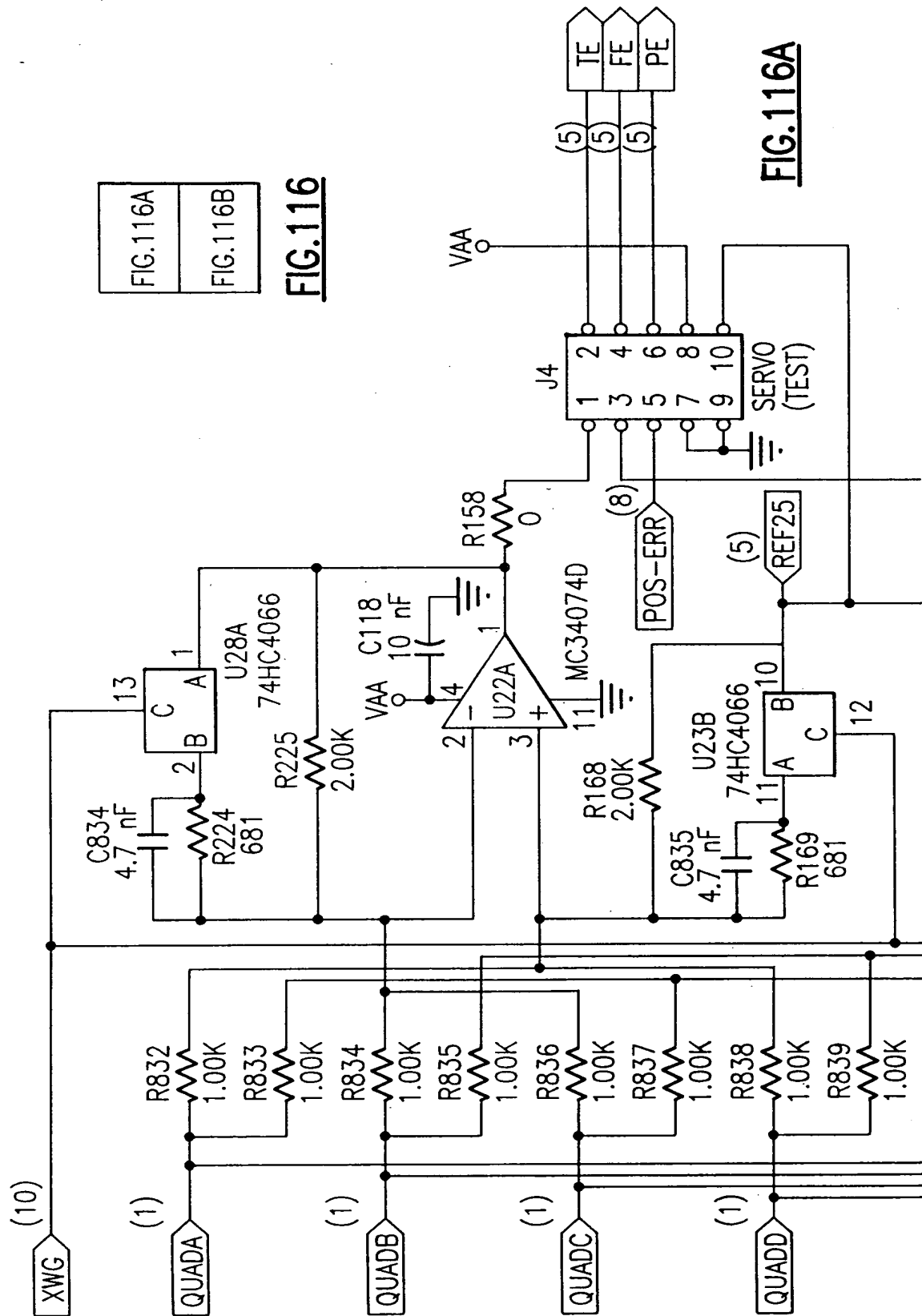


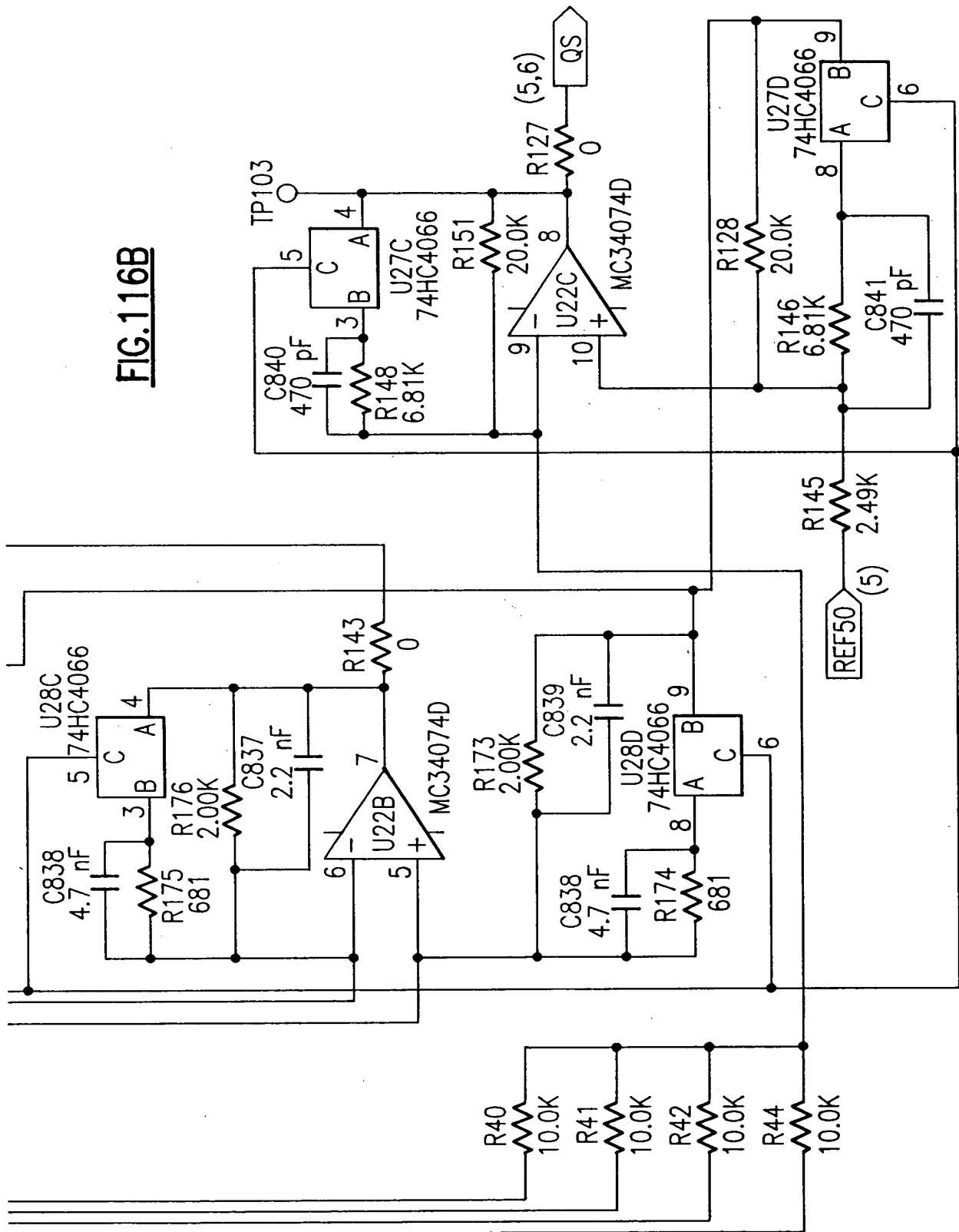
FIG.116A
FIG.116B

FIG.116

FIG.116A

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FIG. 116B



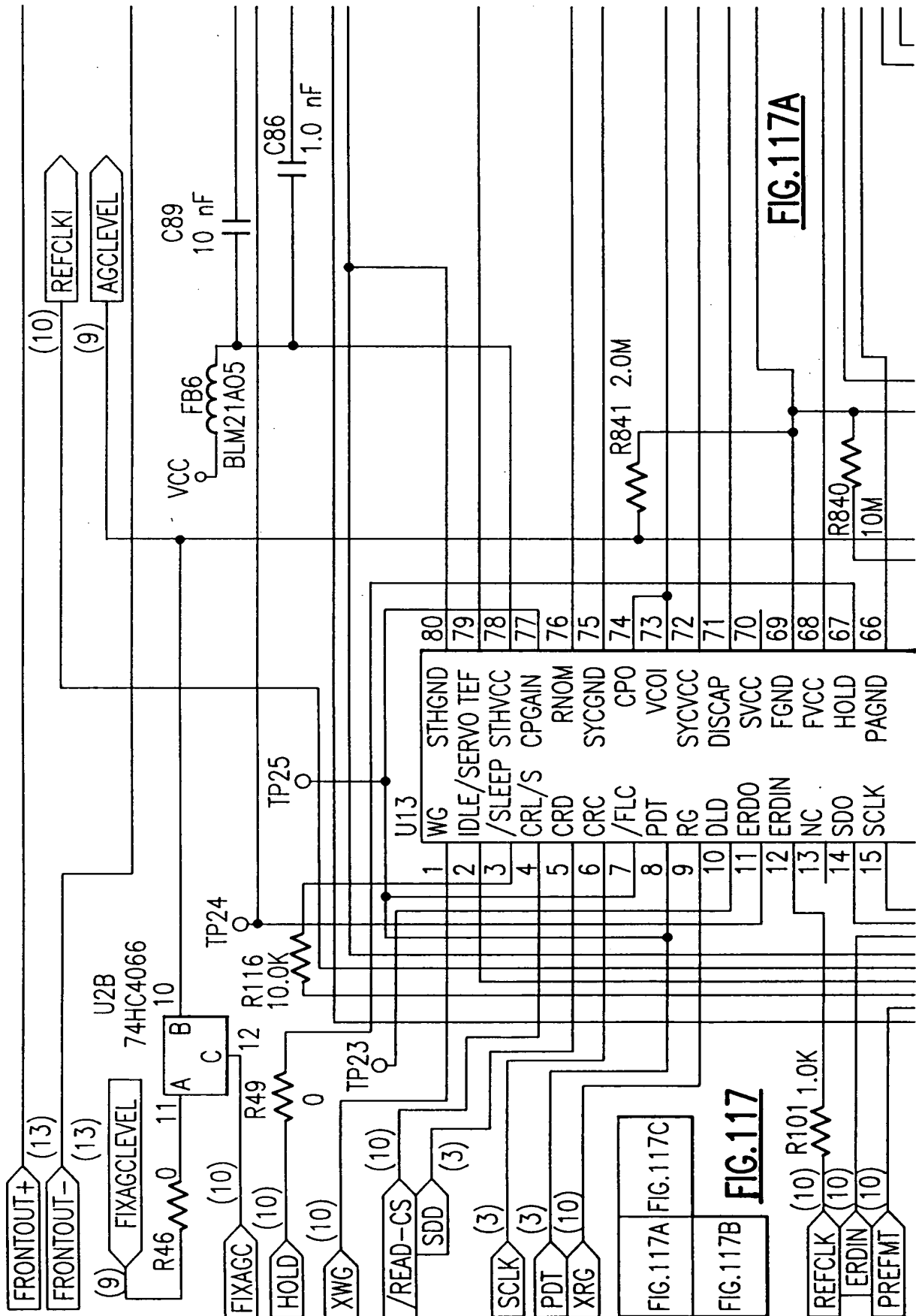
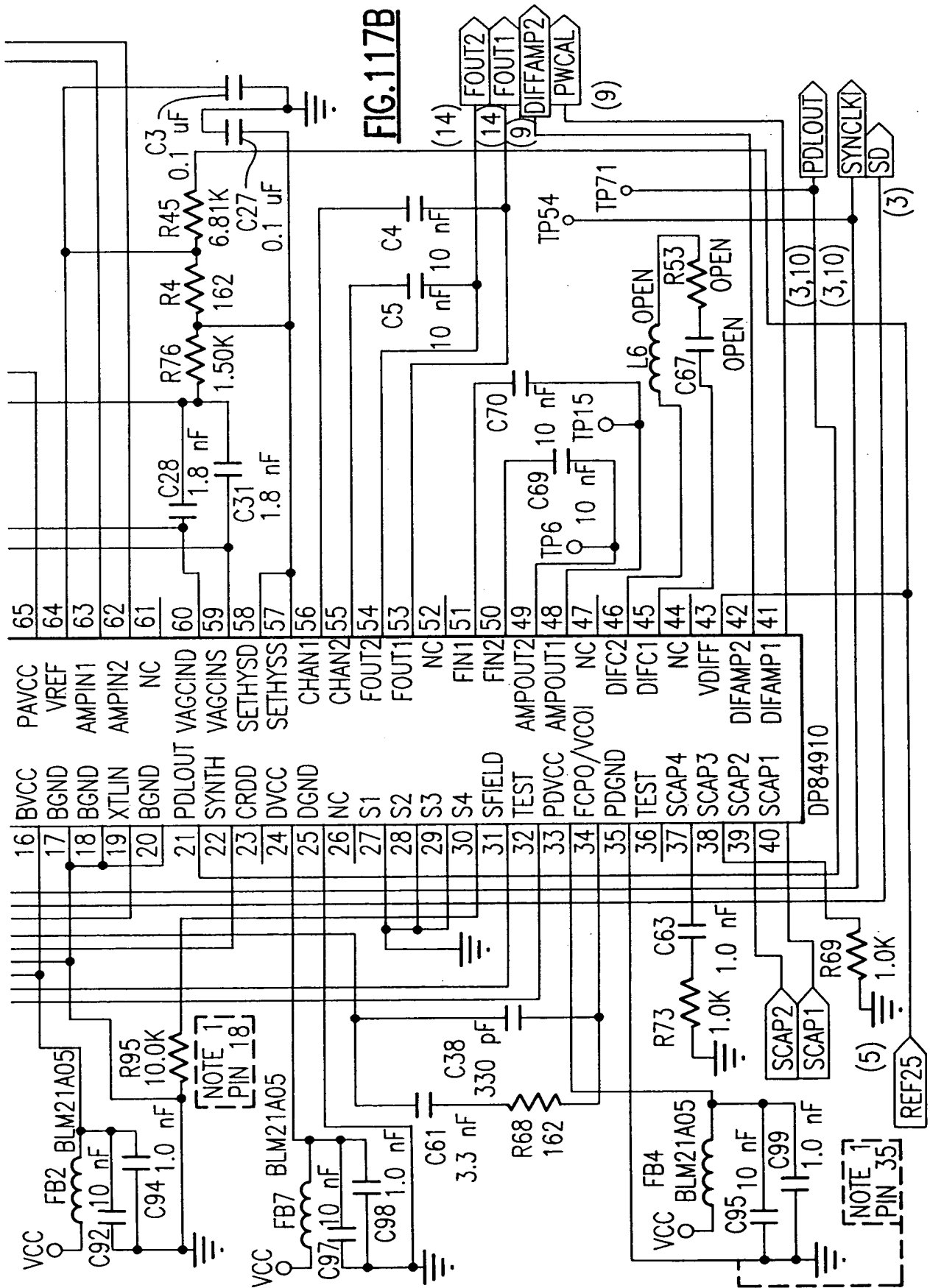


FIG.117A

FIG.117

FIG.117A FIG.117C

FIG.117B



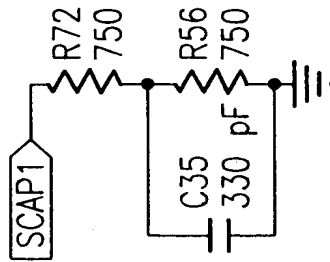


FIG. 117E

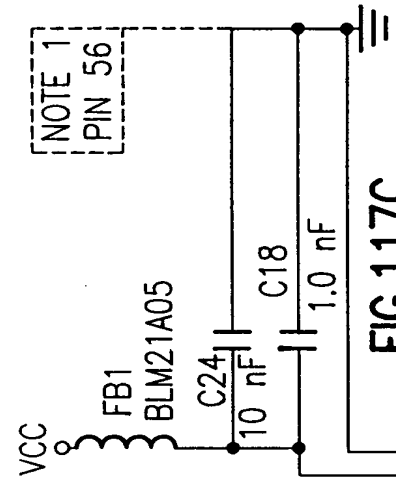
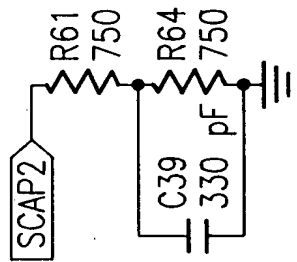
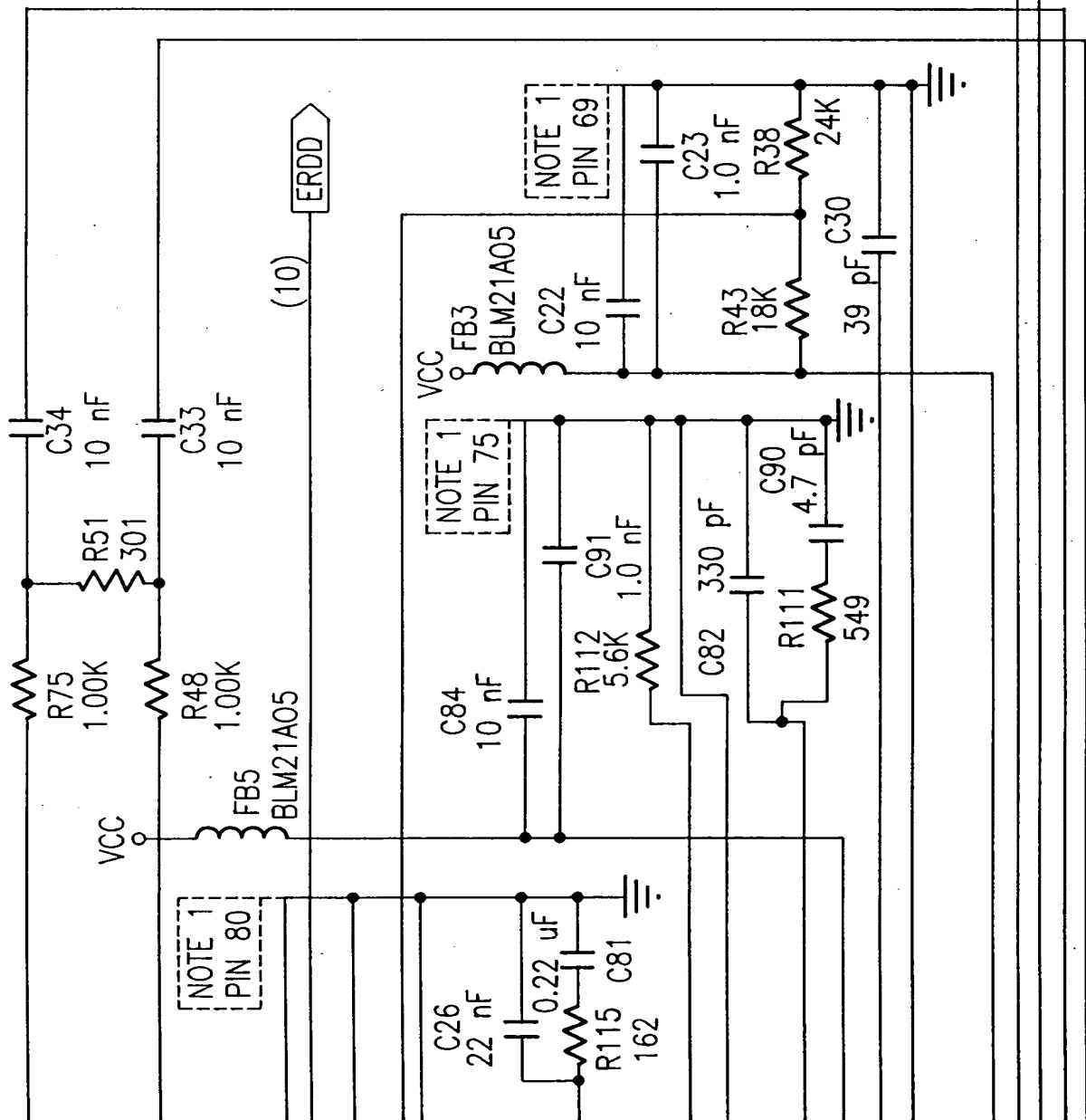


FIG. 117C



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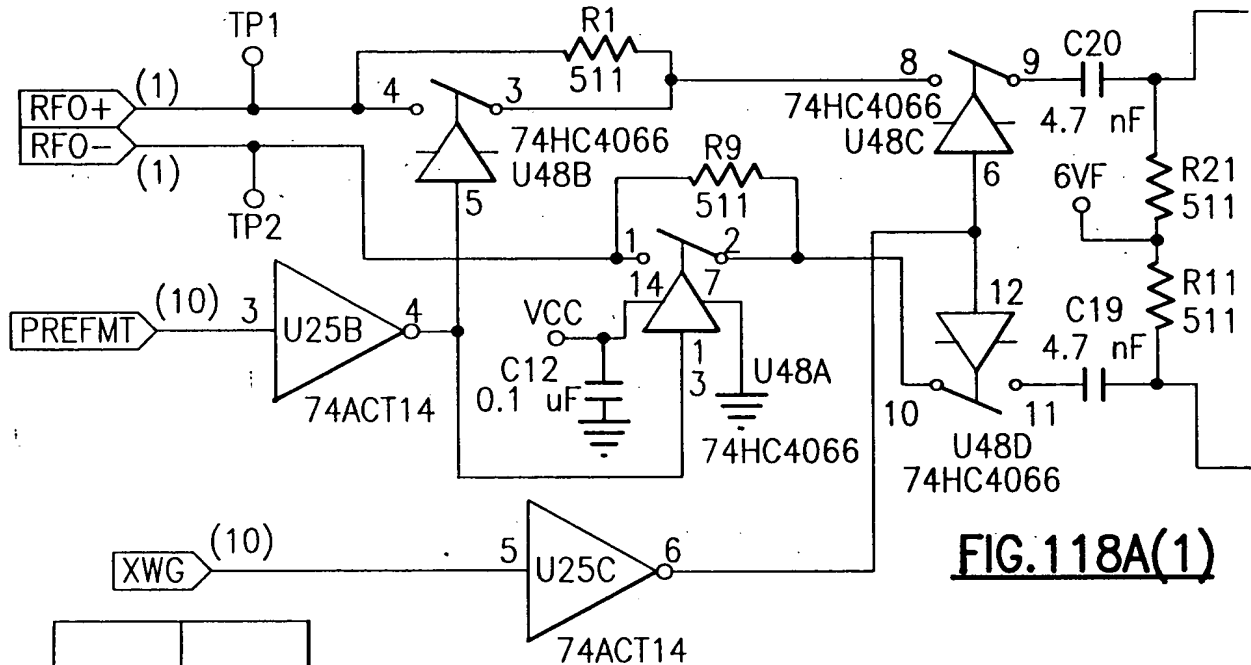


FIG. 118A(1)

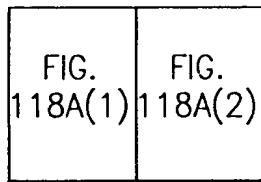


FIG. 118A

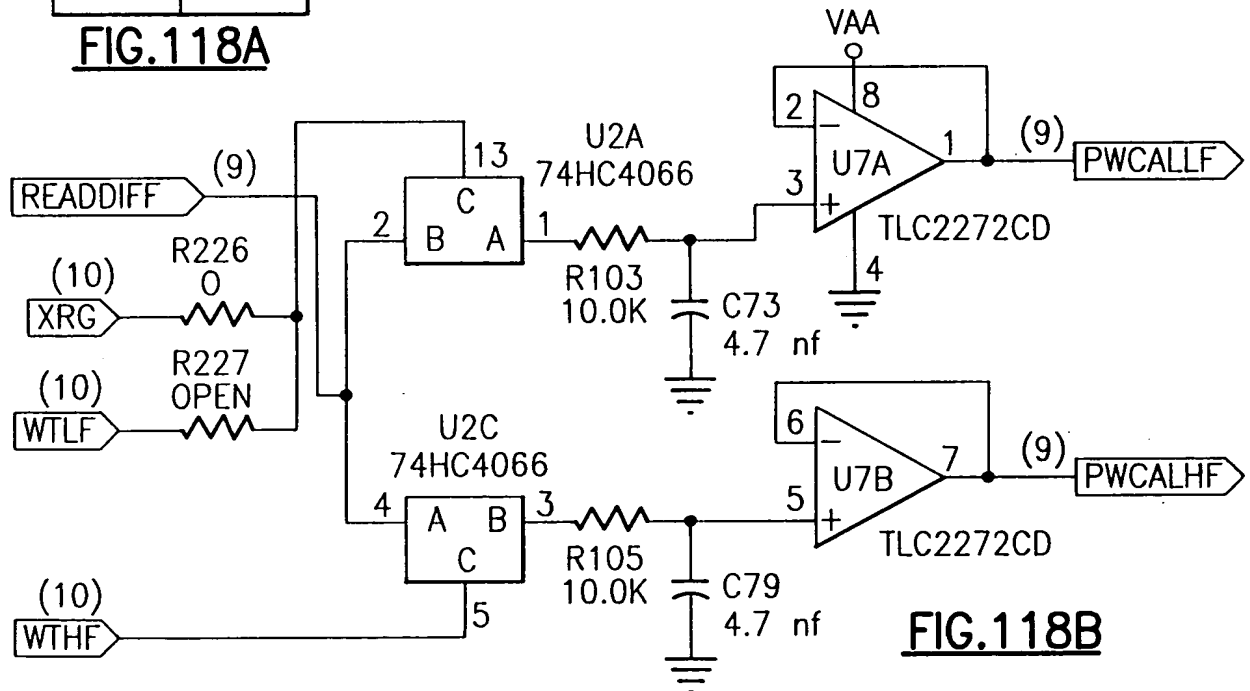
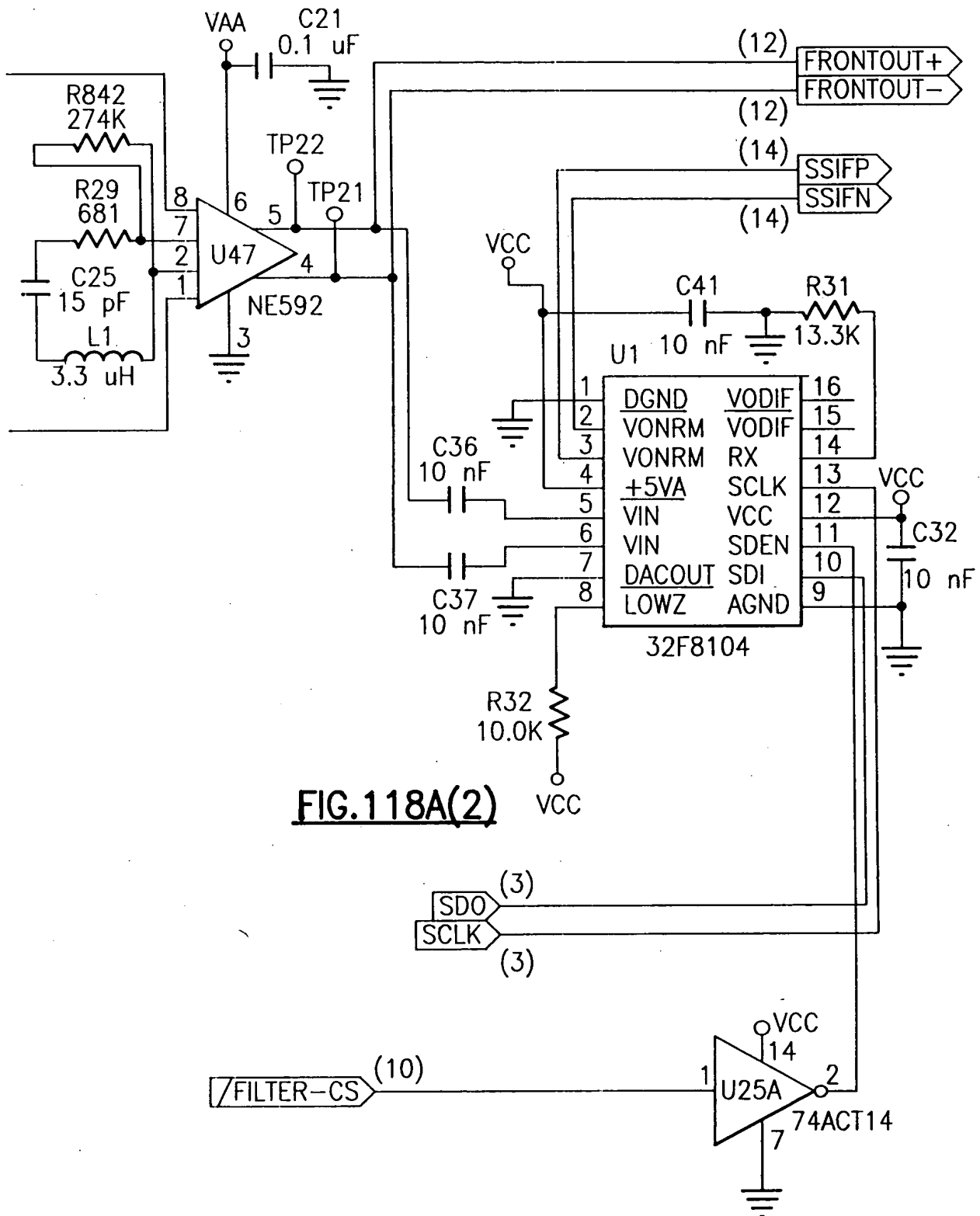
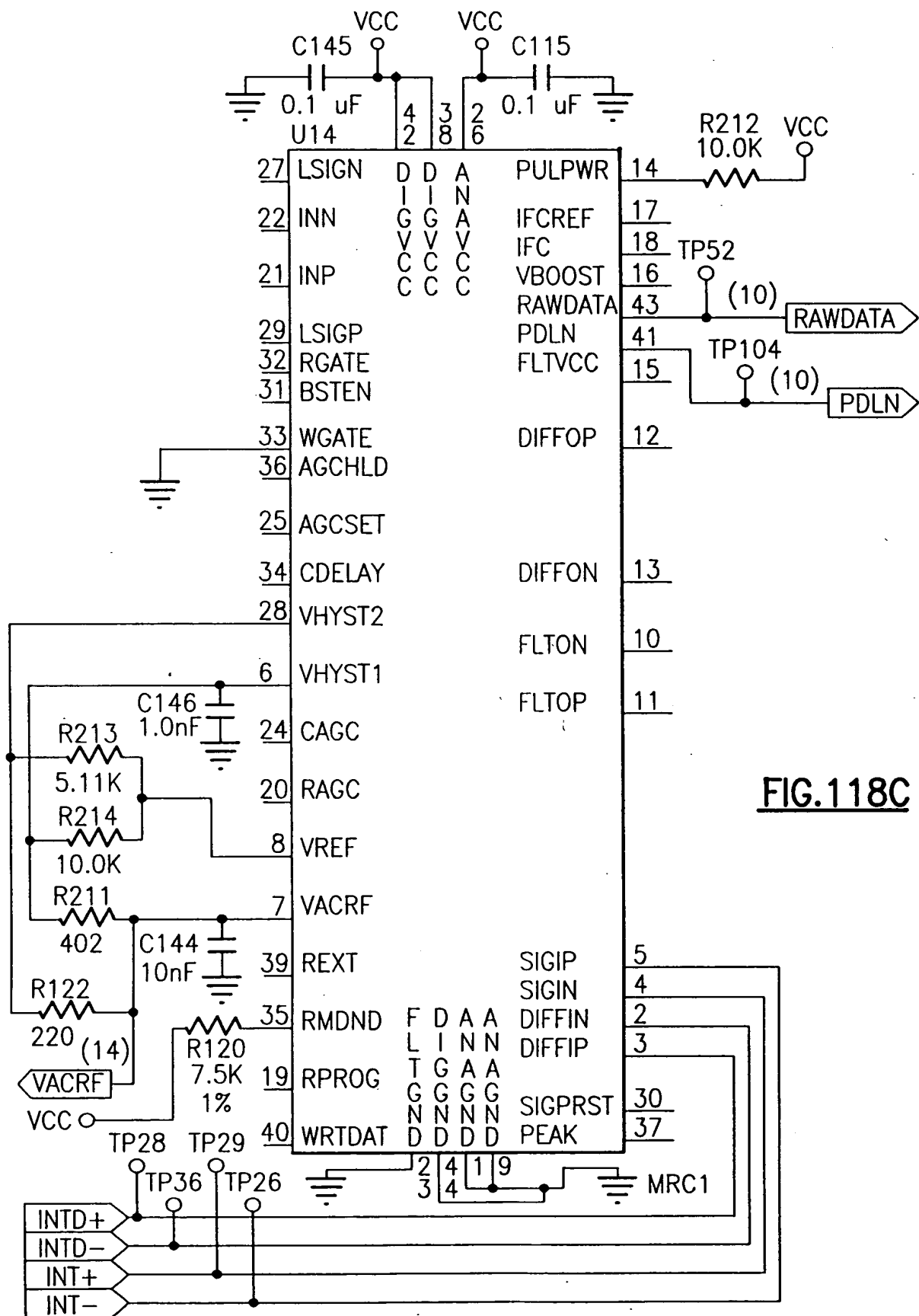


FIG. 118B

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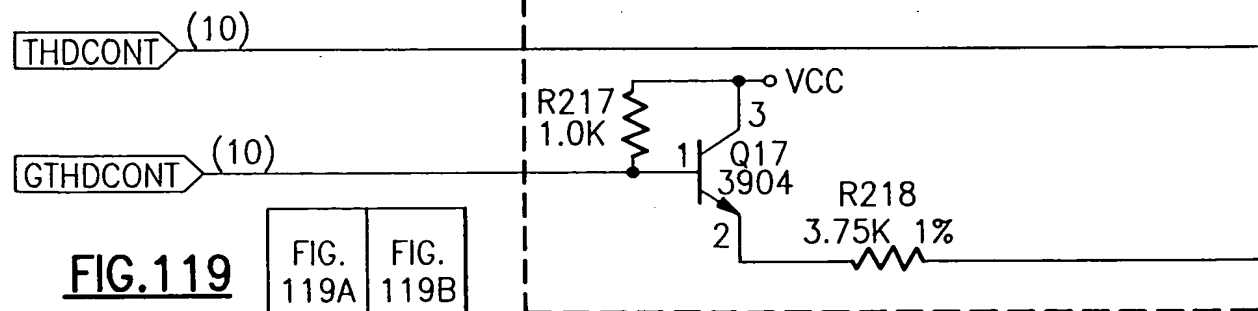
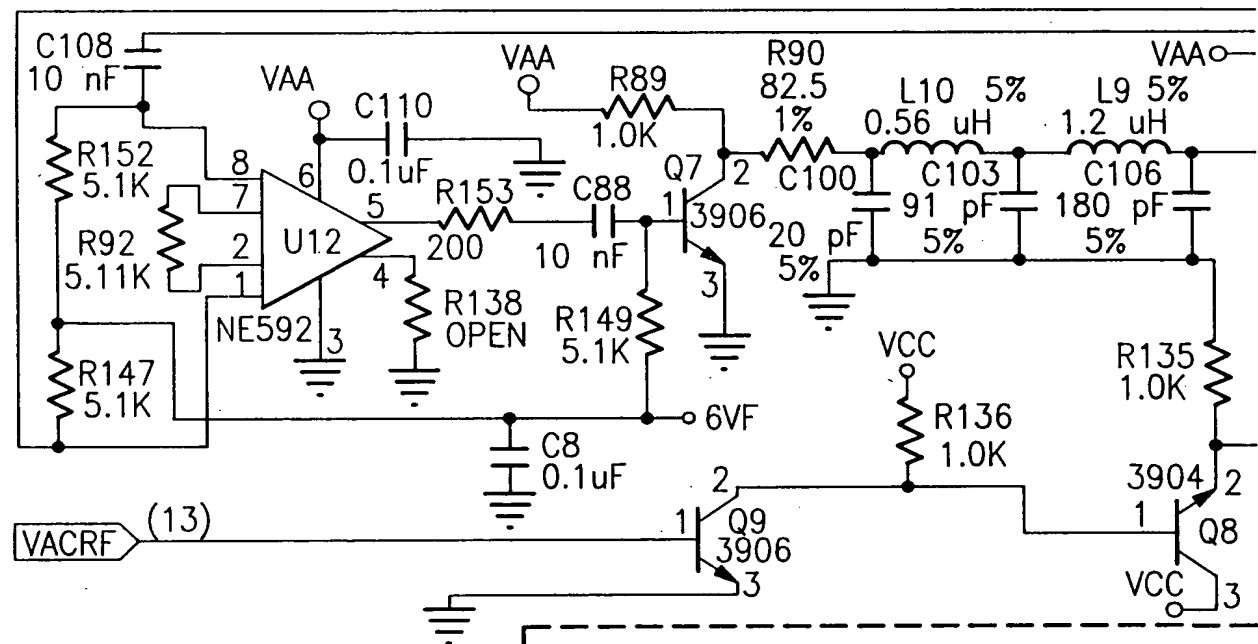
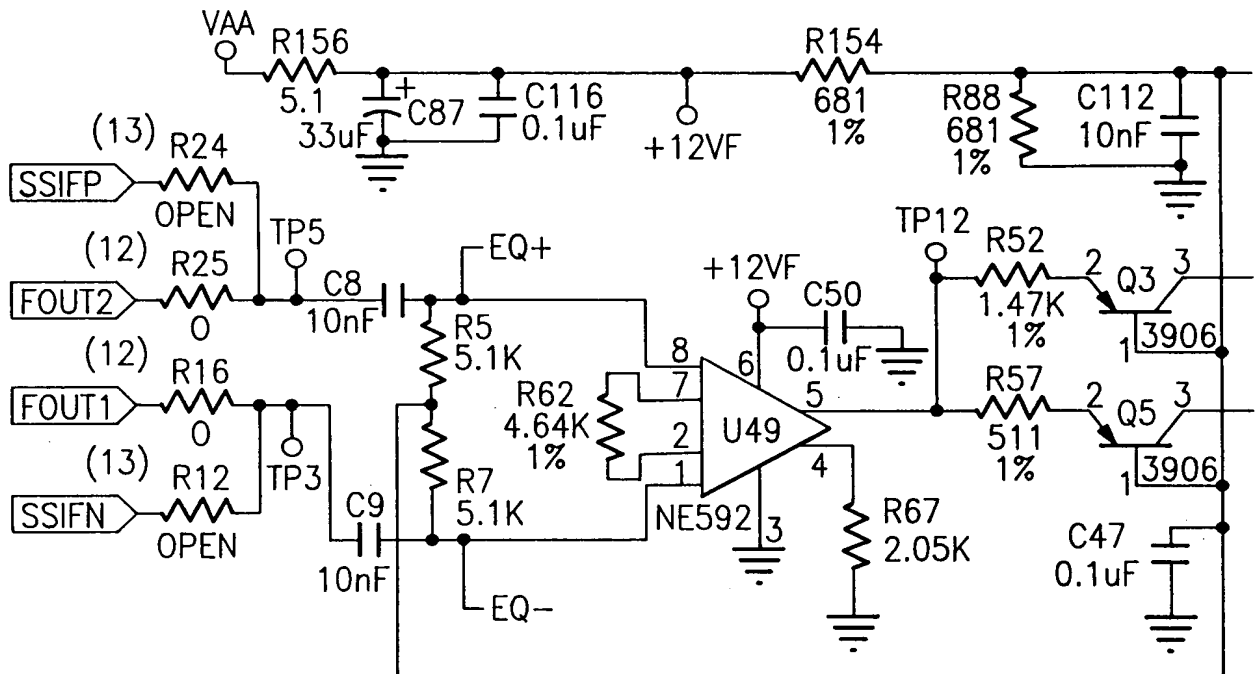
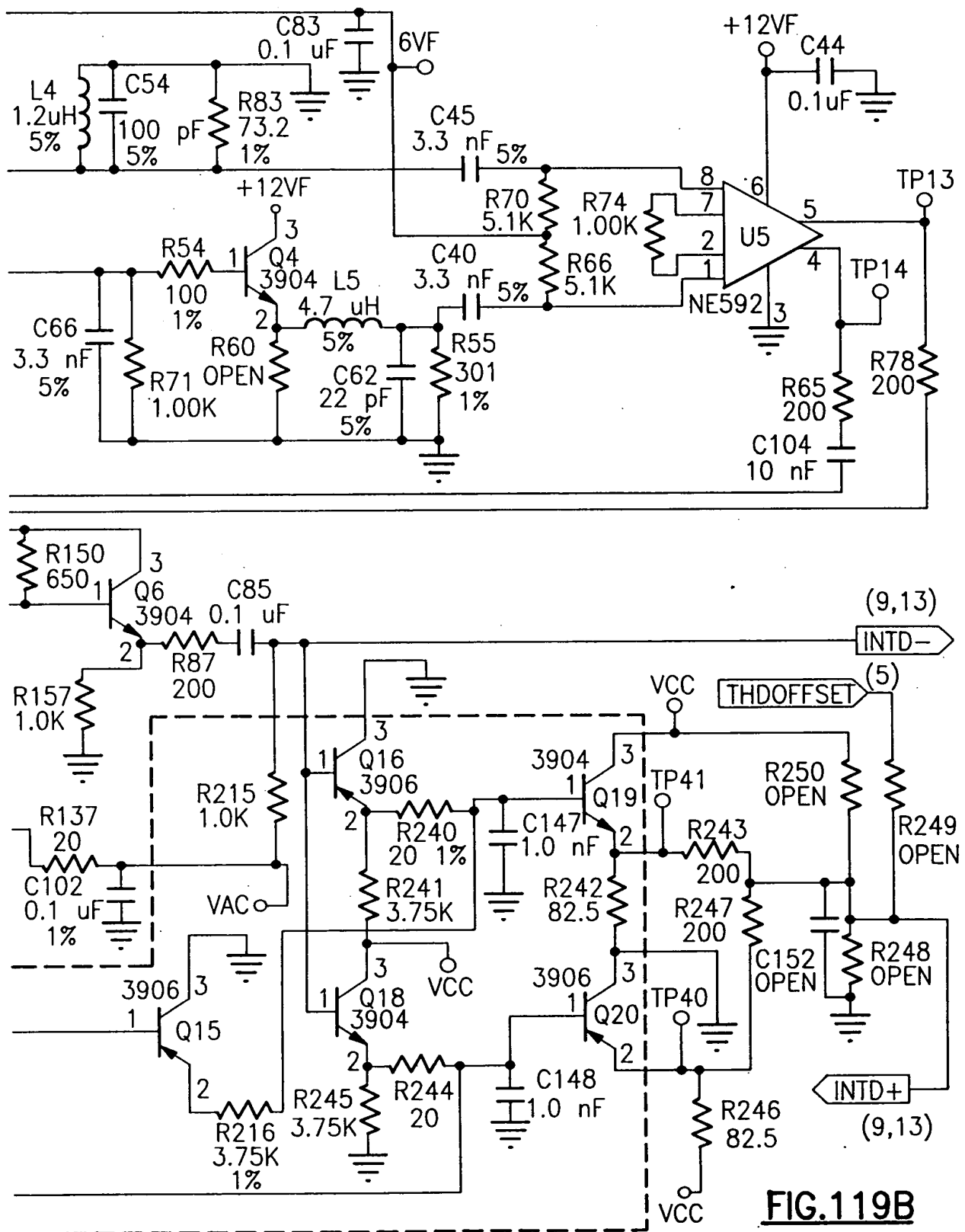


FIG. 119

FIG. 119A

FIG. 119B

FIG. 119A



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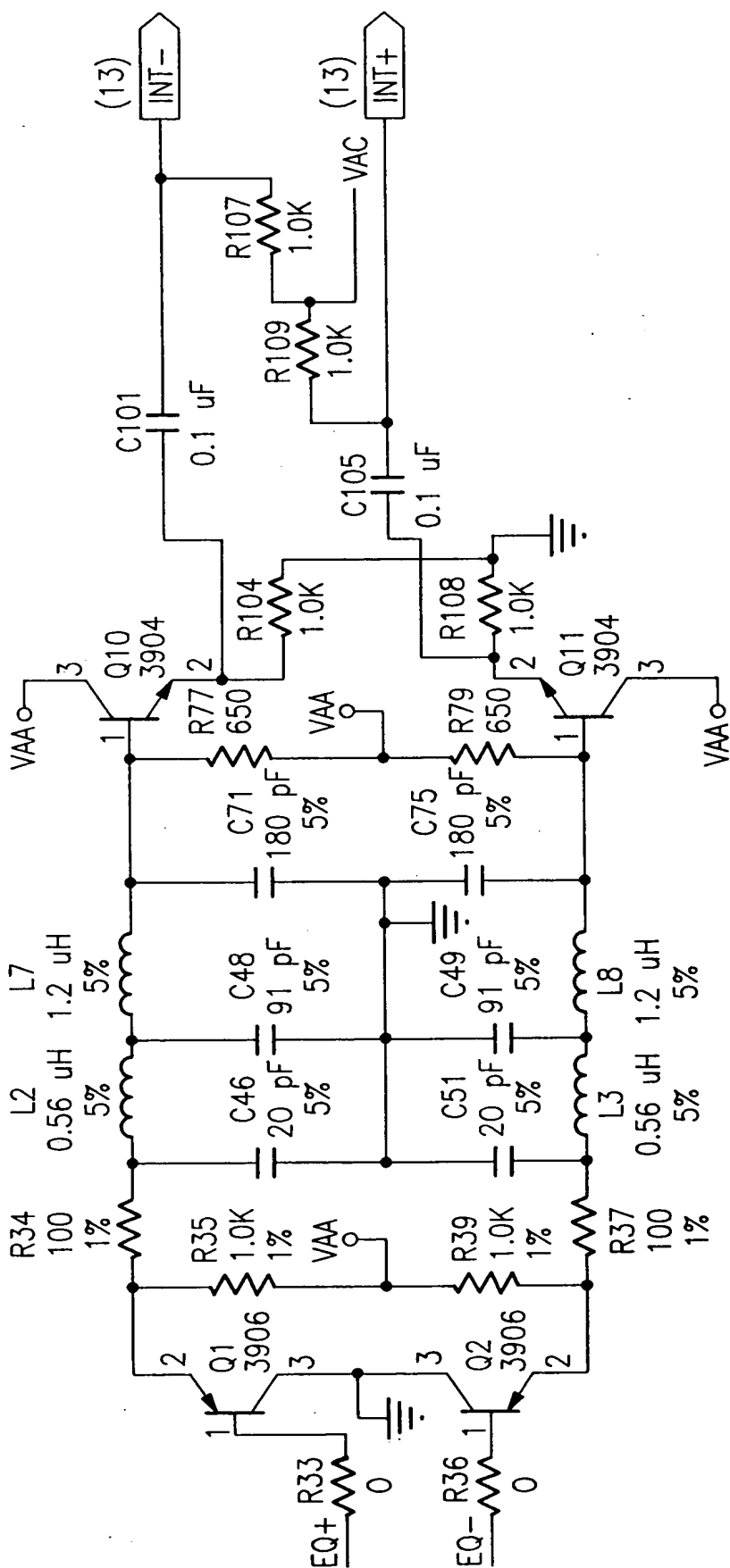
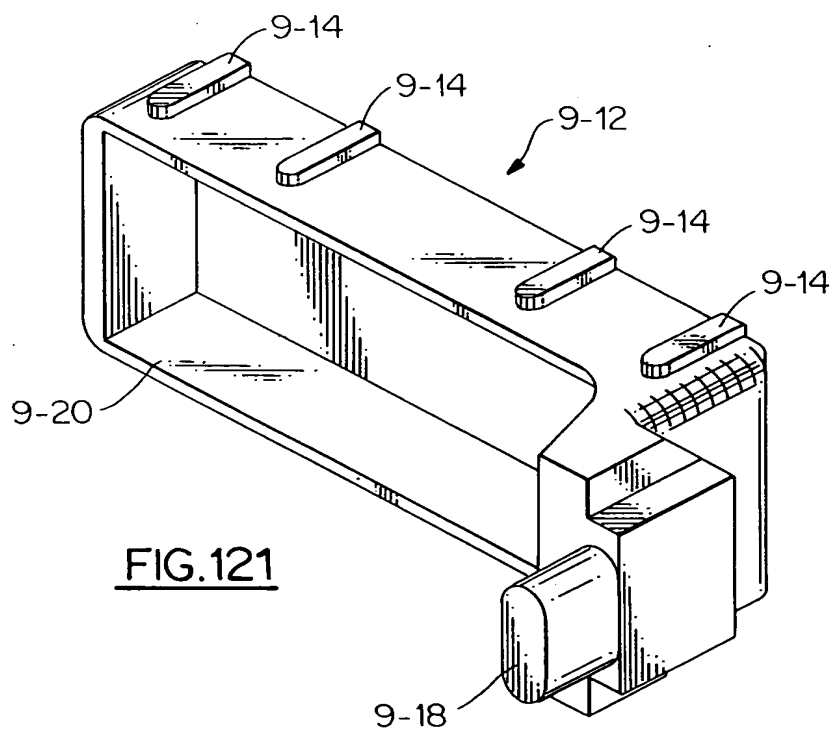
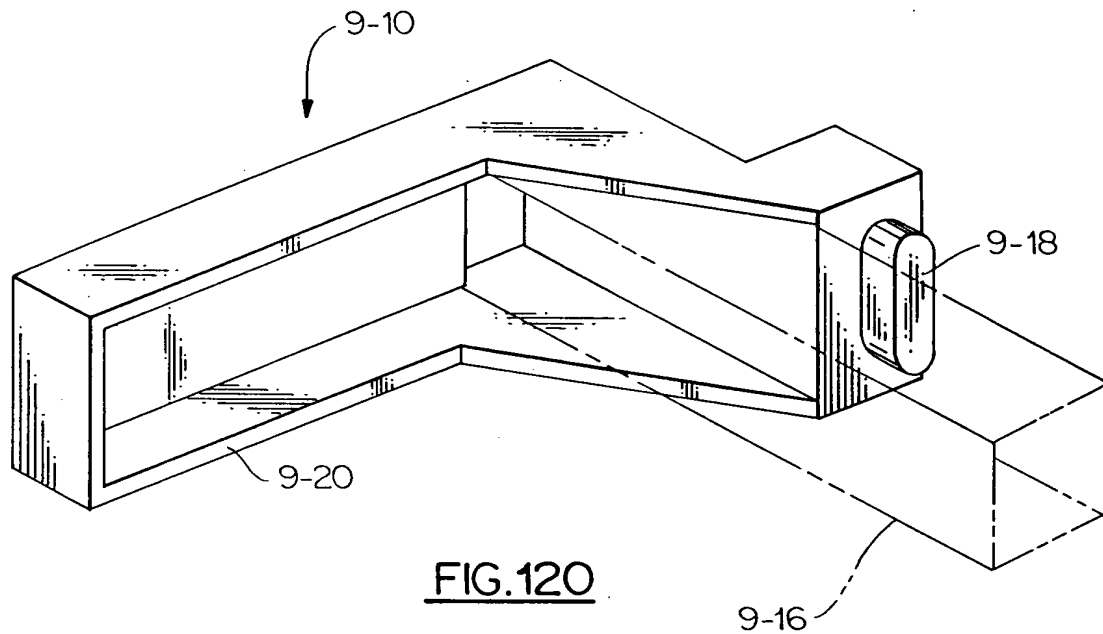


FIG. 119C

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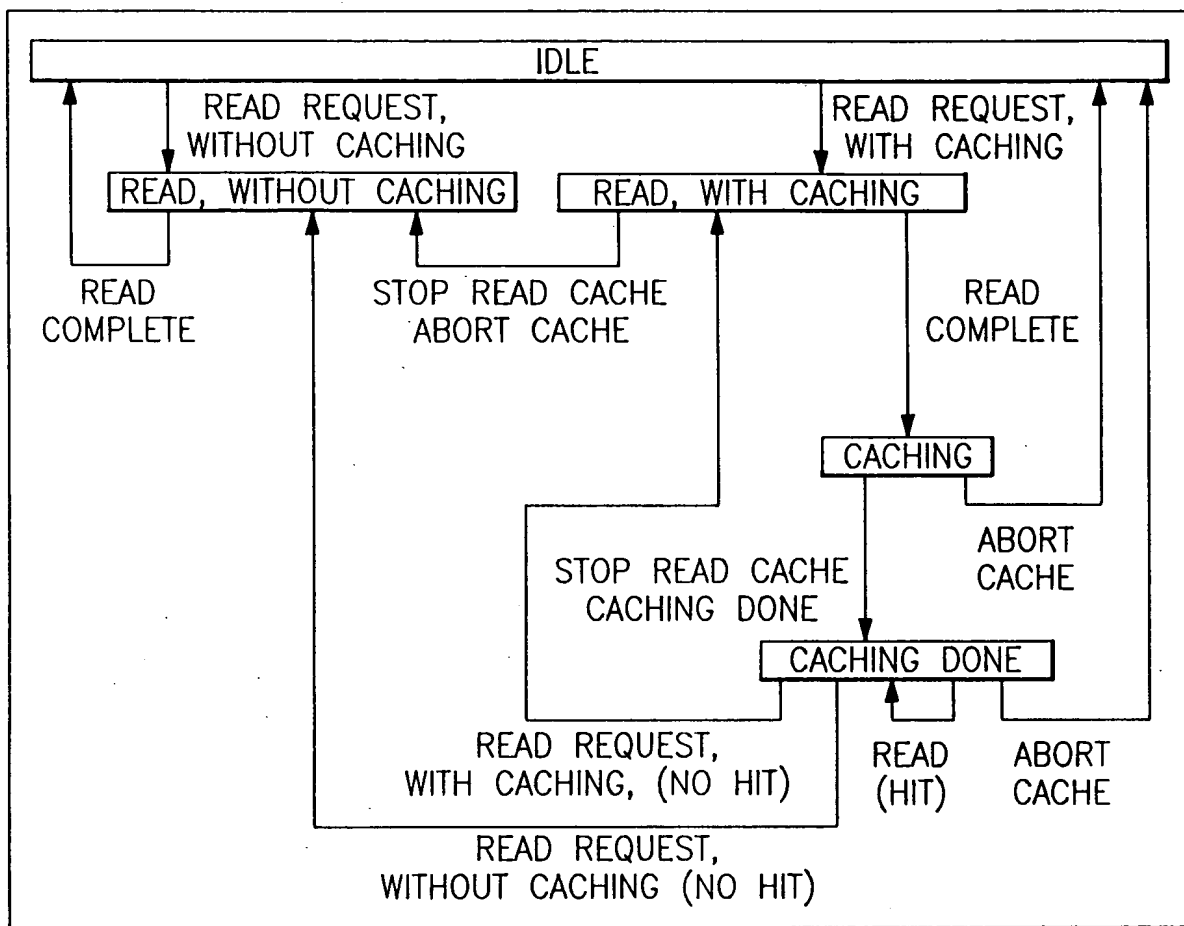


FIG. 122

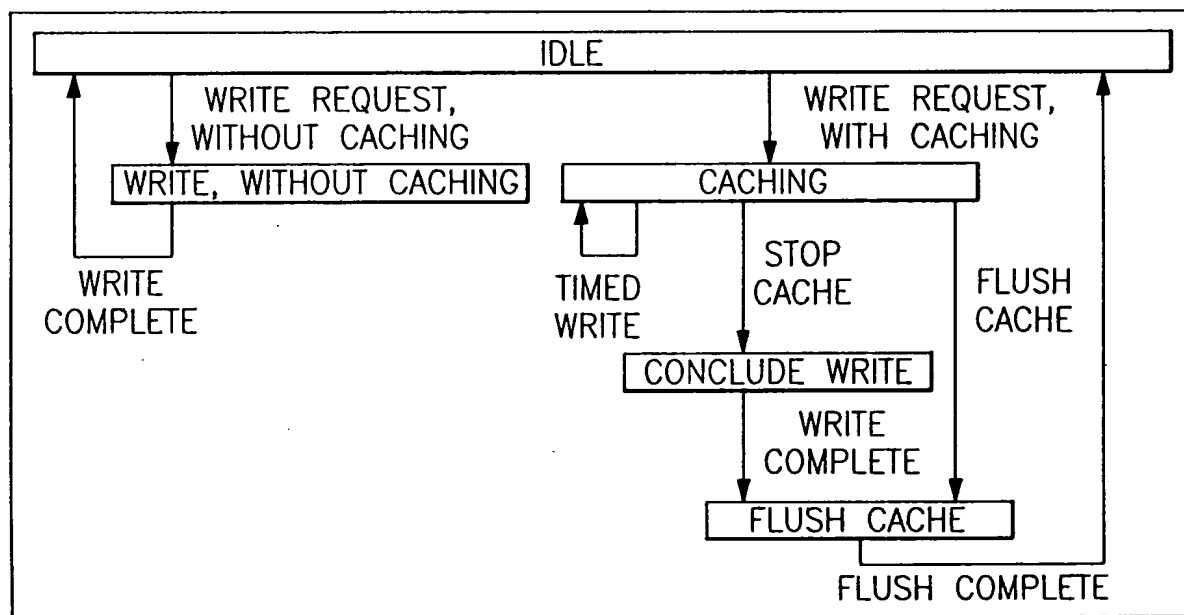


FIG. 123

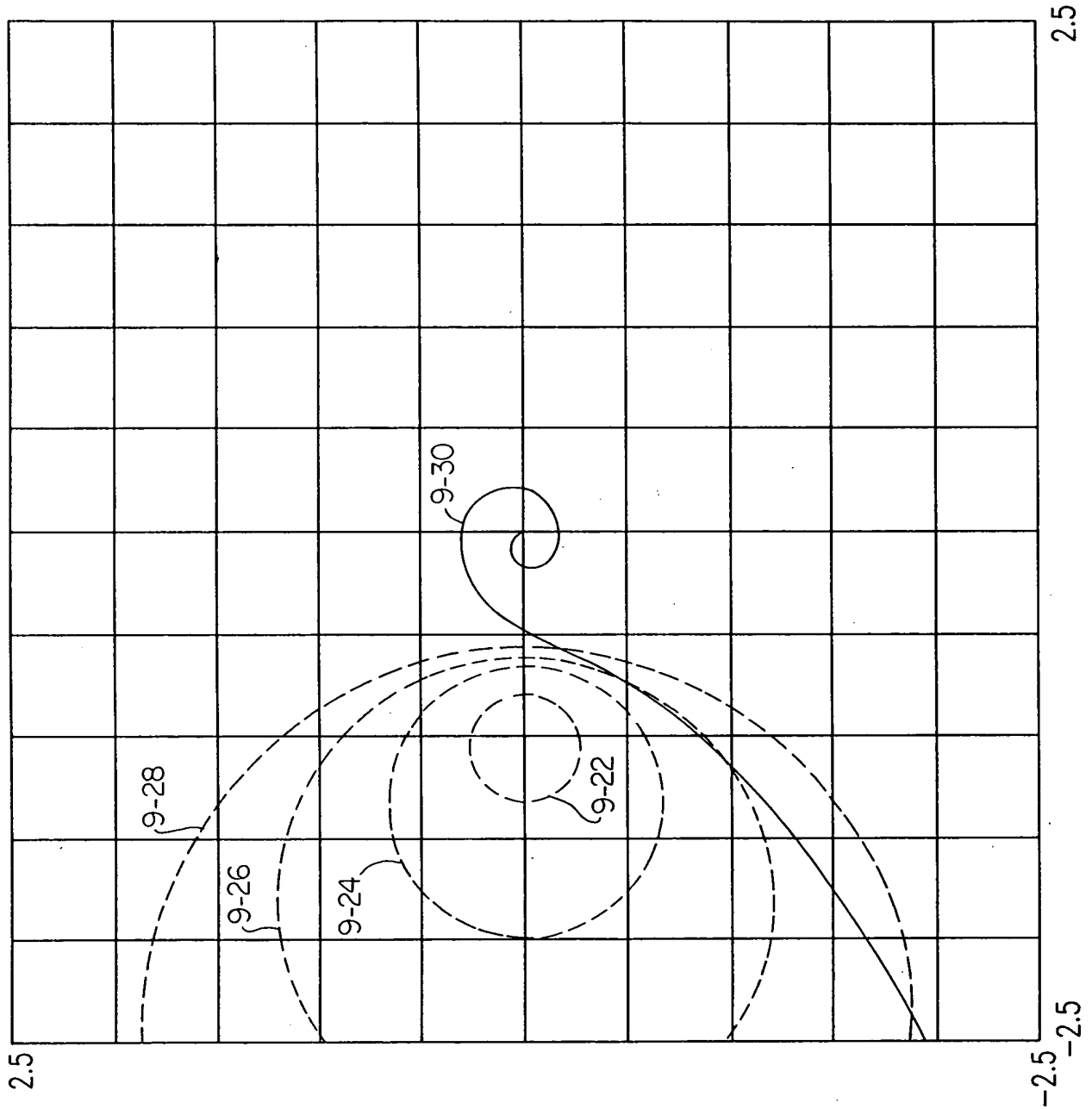


FIG. 124

FIG. 125

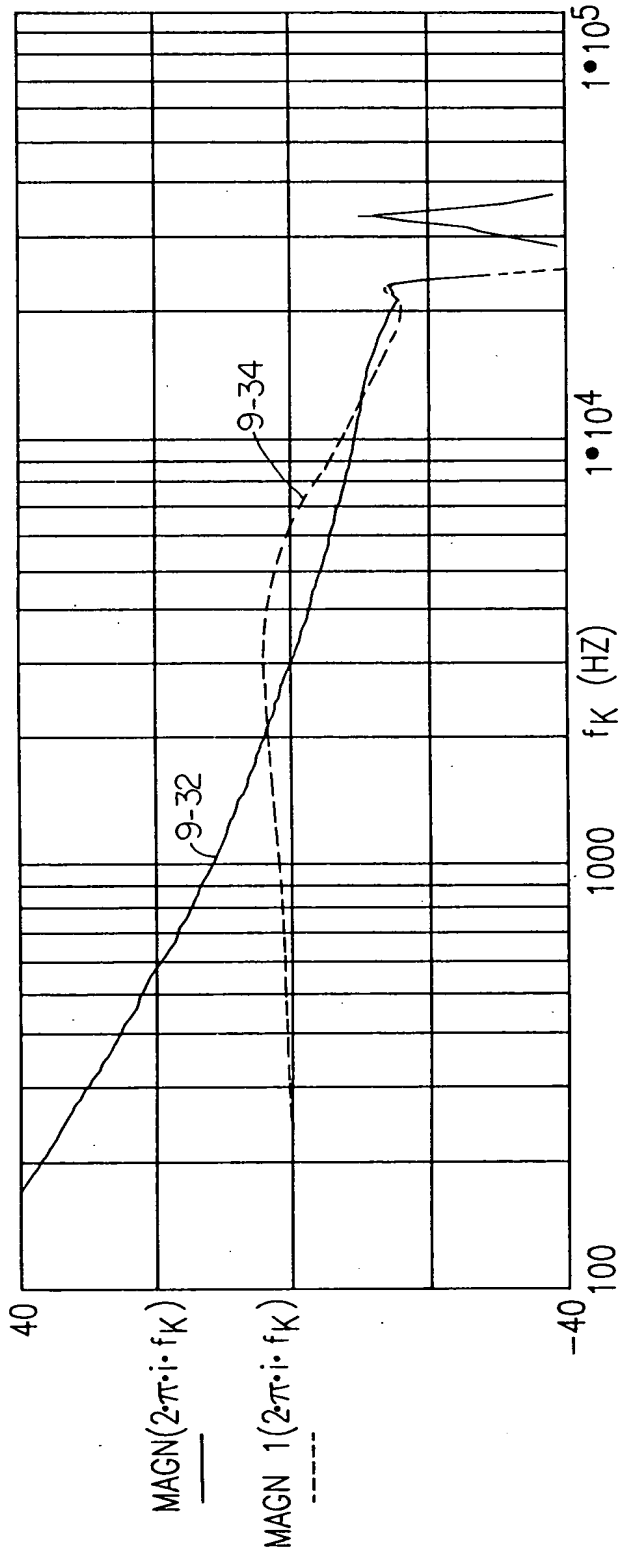
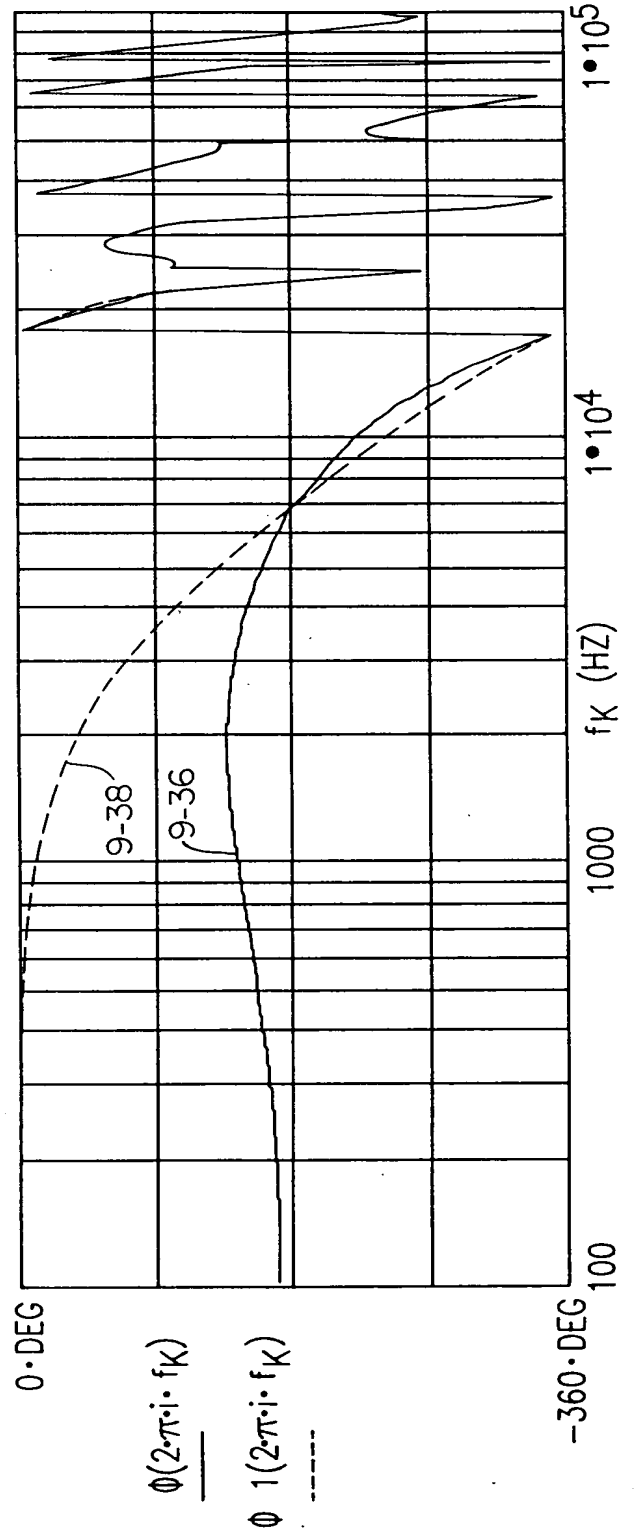


FIG. 126



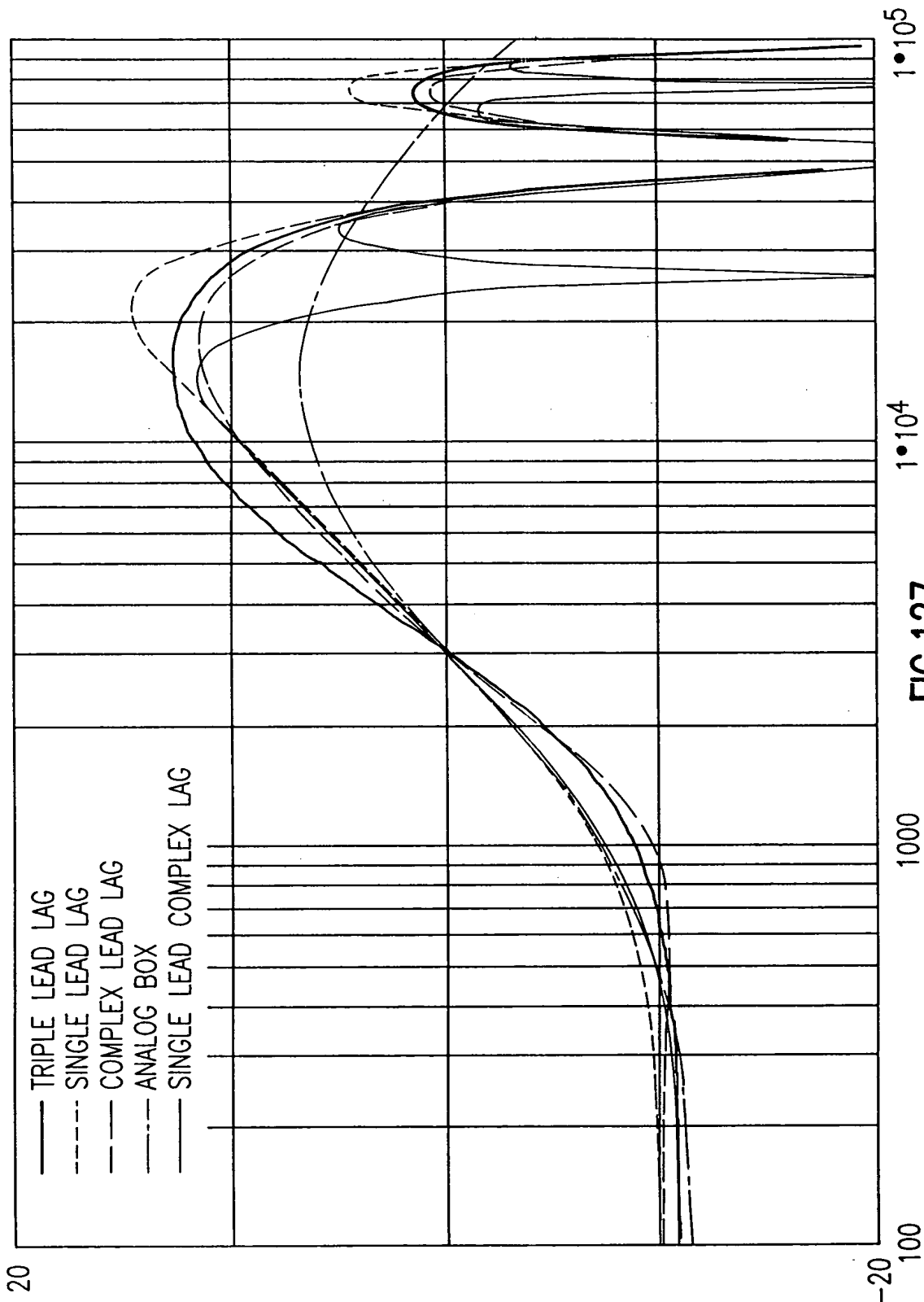


FIG.127

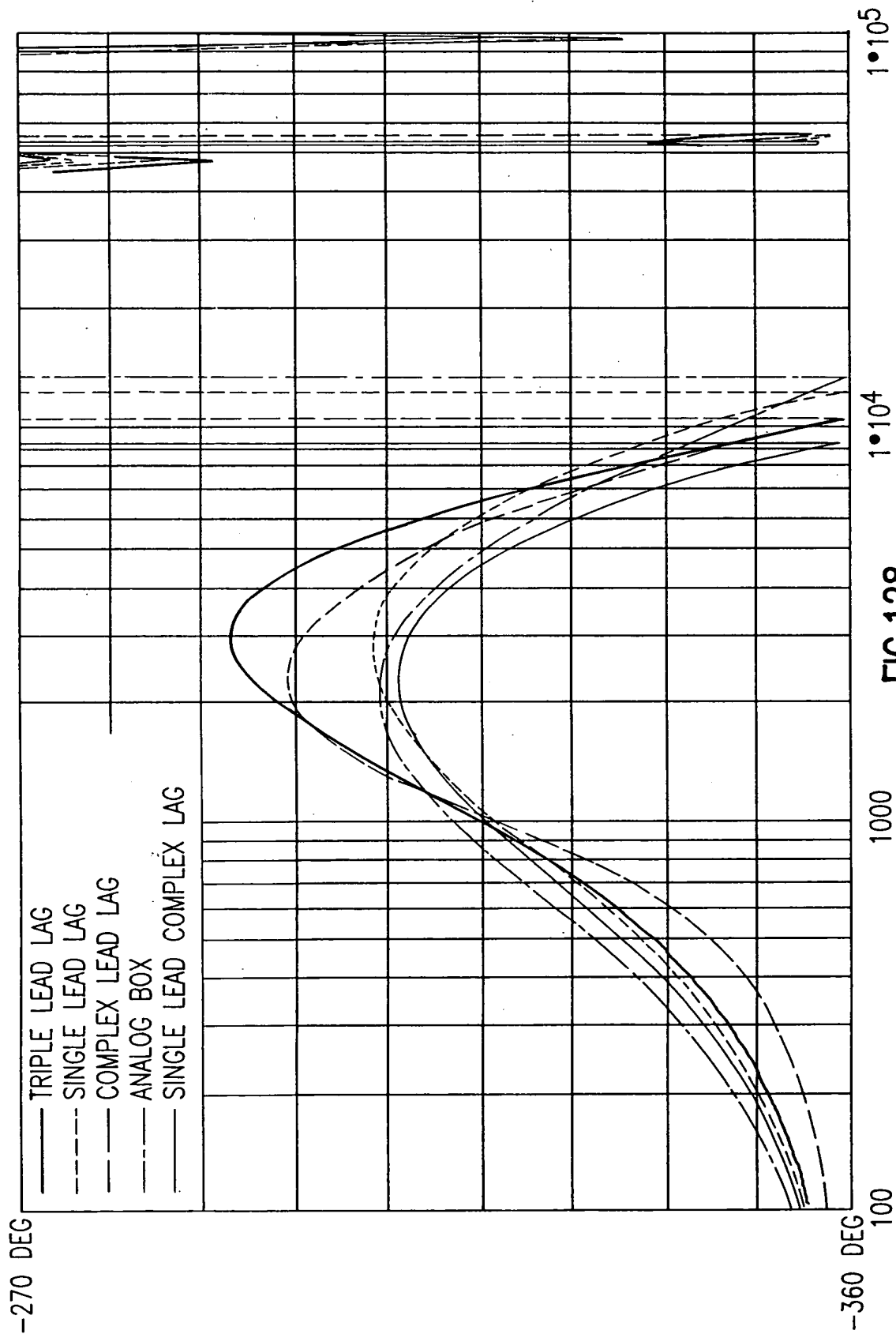


FIG. 128